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COMMUNICATIONS.

Poisoning by Aconite.

Trial of John Hendrickson, Jr., for the poisoning
of his wife in 1853.

By JOHN SWINBURNE, M.D.,
Of Albany, New York.

In reviewing this celebrated trial I shall only
give a synopsis of its various parts :—

1st. The medical testimony, including the dis-
section, *post-mortem* condition of the internal
organs, etc.

2d. The moral and circumstantial points of
especial importance taken from the address of
District-Attorney Colvin and Attorney-General
Chatfield. Also quotations from Judge Marvin's
address to the prisoner before sentencing him.

3d. The legal evolutions of the same.

4th. The review of the letter of Prof. Alonzo
Clark, of New York City, and others, as copied
from the Albany *Evening Journal* and *Argus* of
May 1st, 1854. This was an *ex parte* statement
made by himself, (unsolicited by Prof. T. Romeyn
Beck,) and presented to Governor Horatio Sey-
mour less than one week before the time fixed
for execution, and about one year from the con-
viction of the prisoner.

5th. Also a review of two resolutions passed
by the Pathological Society of New York City.
The able and comprehensive review by Prof. T.
G. Geoghegan, who so fully elucidated the justly
celebrated case of McConky. (See Dublin Hos-
pital Reports.)

In this celebrated trial, though the indictment
was rendered "Poison by corrosive sublimate,"
Dr. Geoghegan, after examining it in all its
bearings, stated that McConky was evidently
poisoned, but that the special agent employed

was aconite; notwithstanding it could not be
detected in the body, yet from its known physio-
logical effects and the appearances *post mortem*,
he was enabled to state what the precise agent
used was; while the subsequent conviction and
confession of the prisoner fully confirmed the
correctness of his judgment.

I am frequently asked for a copy of Dr.
Geoghegan's letter in reference to this case; I
therefore take this opportunity to present it and
its merits to the profession. I trust no one can
read either of these reports of Prof. Geoghegan
without feeling thoroughly convinced that he is
familiar with all the details of vegetable poisons.
The publication of this article is prompted from
various considerations :—

1st. It is due the profession that a report of
its great intrinsic worth should not be lost for
want of publication.

2d. The *ex parte* views of Dr. Clark were
sought and advanced to the detriment of the
merits of the case and in opposition to the facts
in the premises.

3d. While the same party has recently sought
to pervert the merits of this testimony, that it
might be used to the detriment of one of the
medical witnesses, (in another criminal trial,) and
who had investigated both of these cases, and
thereby became of necessity a medical witness
for the prosecution, it therefore behooved me to
present a synopsis of the matter, that an enlight-
ened profession may judge of the merits and de-
merits for themselves.

4th. In the American edition of Taylor's Medi-
cal Jurisprudence, by Dr. Hartshorne, of Phila-
delphia, is an allusion to this identical Hendrick-
son case, which, at first sight, might appear as if
from the pen of Prof. Taylor; but, upon careful
inspection, it will be found to emanate from an
entirely different source. In other words, this
notice never would have found a place in the

American reprint by the sanction of Prof. Taylor; nor was it placed there for the advancement of science; nor do we believe Dr. Hartshorne would have allowed it had he known the motives which prompted its introduction.

Dissection, post mortem, about thirty hours after death. Saw body about sixteen hours after death.

External appearances.—Face and anterior portion of the body unusually pale and apparently bloated, swollen, or puffed—the face decidedly so—and presenting an almost translucent and watery appearance, though very calm and composed, and no distortion. Eyes and mouth closed; teeth about one-quarter of an inch apart.

On the inside of lower lip, a little to one side of the median line, and down near the alveolar process, so that it could not have been injured by the teeth, was a distinct, true ecchymosis as large as a dime, and in this was a cut of one-quarter of an inch in length, extending through the mucous membrane and into the tissue beneath; both were evidently produced at or near the time of death.

On the posterior part of the body there was extensive suffillation, nearly two-thirds of the way round and extending from the hips to the head. The blood seemed to have all forsaken the anterior and gravitated to the posterior portion, evidencing its great fluidity.

Post-mortem rigidity and elasticity was remarkable. The entire voluntary system of muscles were so rigid and elastic as to prevent them from being relaxed. The jaws were firmly fixed, the arms and legs would fly back with great force when any attempt was made to flex, extend, or separate them. Upon dissection, the rigidity and elasticity were found to exist only in the muscular structure, and was not in fact simple cadaverous rigidity, since it was noticed by all who saw her when she was "not quite dead," as witness expressed it. The neck was so stiff that in attempting to bend it the whole body would be lifted up. The lips were of a bluish white, and swollen.

All these external appearances were noticed before she was in any degree cold, and perhaps not quite dead, as will be seen by reference to Attorney-General Chatfield's address. The tongue was extremely white, furred, swollen, and indented on the edges, as if by the teeth. The heart was healthy but empty, except a small clot in the right auricle. Lungs healthy and normal—cavas

contained about two ounces of dark, fluid blood. Liver healthy and normal, while the gall-bladder was not more than half full. Spleen, kidneys, and pancreas were healthy and normal. Womb was indurated and enlarged very much and adherent about one inch to the small intestine, while the os was ulcerated; internal cavity twice its normal caliber. The ovaries were enlarged to about twice their normal size, while one of them contained a clot of blood half an inch in diameter near its center. The blood contained in the above-named organs had so far gravitated to the capillaries of the dependent portion of the body that during the dissection the hands and instruments were scarcely soiled with blood; while the only blood in these organs was mostly in the cavas, and that in a fluid state.

The dura mater was more than normally adherent to the skull; the arachnoid presented some opacity near the top of the skull; the brain was healthy, while upon its surface it was congested, or its veins were full of blood—slightly congested; the base, and the spinal cord of the cervical vertebrae, were normal and healthy. The peritoneal surface of the stomach and intestines was red and congested. The stomach was contracted to about two inches in diameter, (one-third of its normal capacity,) and thickened by this contraction to more than twice its normal condition. The mucous membrane was thrown, from the contraction of its muscular coat, into folds, and covered with bloody viscid mucus. This mucous coat was at least five to six inches in diameter, and from this, some idea can be formed of its folding or corrugation. The duodenum and all the small intestines were contracted both ways, longitudinally and transversely; its inner coat was highly congested, folded upon itself, and covered with mucus mixed with blood. The jejunum was in a high state of congestion and contraction, its mucous coat covered like the duodenum with mucus strongly tinged with blood. The ilium was considerably congested and contracted, but a little less than the jejunum; the mucous coat covered with viscid matter and more highly tinged with blood. All these portions of the intestines were contracted to about one-half their normal diameter, while the corrugation was strongly marked. The viscid matter had somewhat the appearance of chyle and chyme, while in none of them could there be found anything resembling excrementitious or fecal matter. The cæcum was filled with thin, watery, fecal matter, and

the walls in contact with it were considerably congested; in it were lemon, coriander, and other seeds in considerable quantity. The upper part of the colon contained thin and less watery fecal matter than the cæcum; nearer the rectum it became more solid; the lower part was quite dry and hard. The rectum contained fecal matter dry and hard as if from extreme costiveness. The bladder was quite healthy and empty, but contracted to about two inches in diameter, while its mucous coat was thrown into folds, and its muscular coat was firm and rigid. Its mucous lining was full four inches in diameter.

Hendrickson (the prisoner) stated, when examined before the coroner, that—

"The deceased was in her usual health, and had partaken of her food as usual, but that she had not had a passage for two weeks, and suffered pain as a consequence; that they went to bed between ten and eleven o'clock, talked about an hour; she then requested him to turn over and stop talking, as she wanted to sleep. They went to sleep; between two and three o'clock he was awakened from sleep by the horses kicking in the barn; found deceased lying in the center of the bed, and he against the wall. He thought her dead, and hallooed for the family."

This would leave only three hours from the time he went to sleep to the time of finding her dead, as he says, while the family thought her not quite dead, as will be seen by reference to the moral part of the article. All the organs were healthy and sound as far as organic disease is concerned.

The opinion drawn from the preceding facts by the examining physicians was, that she did not die a natural death; but that it was induced by the ingestion of poison, while, from the analogy of these post-mortem appearances to a great number of animals poisoned by aconite, they gave the opinion that this was the special agent employed. This, conjoined to the chemical analysis, made them more sanguine in their opinion.

The succinct review of the chemical evidence may not be amiss in this connection.

The chemist, "Dr. Salisbury, took a small portion of the stomach of Hendrickson's wife—its mucous surface, and a small portion of the duodenum, and with a portion of the solution obtained from these, he first tested for prussic acid and other poisons, and not detecting their presence, he took another portion of the same and tested for aconite, and the tests indicated aconitine, the poisonous principle of aconite. This, however, did not establish that he had found aconitine. Another process, nay, two other processes, by

analysis, were resorted to, and a precipitate was obtained. But this did not establish that he had found aconitine. There was yet another test to be adopted, and the only test, by which the presence of aconitine can be established—the *test of taste*. That was tried. A portion of the precipitate was placed on his tongue. It gave a bitter taste—a sparkling sensation at first, which, in three or five minutes, turned into numbness, producing a stiffness of the surface. *That test established the presence of aconitine*, for there is no other known substance, either in the animal or vegetable kingdom, so all the writers on toxicology assert, which gives this certain and peculiar taste of aconitine. But Dr. Salisbury did not stop here. He enveloped the residue of the solution in pieces of beef-steak and fed it to a cat. In about half an hour she exhibited a choking sensation and swallowing; this was followed by slight contraction of the muscles, twitchings, which moved the limbs slightly, and this by a tendency to vomit. These spasms lasted from one to two minutes; considerable stupor succeeded; she lay down upon her side and breathed heavily, as though she was under the influence of some narcotic. This lasted for some time; it gradually passed off, and in about three hours she was quite natural again. Here again was an indication of poison. To this same cat he subsequently administered the tincture of aconitine, and it killed her in an hour and a half, and the *post-mortem examination of the stomach and intestines of the cat revealed the same precise appearances which those of Mrs. Hendrickson exhibited*.

"In some thirty other experiments with aconite upon cats and dogs, the post mortem revealed the same unmistakable appearances, while no other poison produced any such effects."

The points of moral testimony, as selected from District-Attorney A. J. Colvin's address to the jury at the time of trial:—

The prisoner, John Hendrickson, Jr., is a young man of twenty years of age, of respectable parents, born in the town of Bethlehem, County of Albany, where he has resided since his birth. He married (deceased) Maria Vandeusen, daughter of Lawrence Vandeusen, late clerk of Albany County, and recently deceased. Maria, at the time of her marriage, was seventeen years of age, while at her decease (March, 1853) she was nineteen years of age. She was well educated, accomplished, amiable, kind-hearted, affectionate, and devotedly attached to her parents. Previous to deceased's marriage, Mr. Vandeusen had retired from his lucrative position (as county clerk) with the reputation of being wealthy.

The prisoner considered the connection advantageous to him, and consequently married deceased in January, 1851, although it was opposed

by deceased's parents on account of Hendrickson's well-known bad character. The prisoner and deceased resided with Mr. Vandusen for some time after their marriage. In the following summer (1851) the prisoner committed a gross assault upon a respectable young lady at Clarks-ville, (the residence of Mr. Vandusen.) In consequence of this, the prisoner left and went to Corning. During his absence of three months, his wife was delivered of a child. Soon after his return, this child was found dead in bed under peculiar circumstances, the prisoner occupying the middle, deceased the back, and the child the front of the bed. Soon after this, prisoner communicated to deceased a venereal disease, which was the original cause of her subsequent uterine disease, besides being a source of great mortification. This led to his dismissal from the house of Mr. Vandusen. During the following fall and winter, previous to deceased's death, her general health became entirely restored, with the exception of the uterine disease before mentioned. This continued to trouble her, probably from some chronic inflammation or weakness.

During the following January, prisoner induced deceased to visit his father's house two or three consecutive times. Again, about the middle of February, prisoner and his sister induced deceased to make a fourth and last visit to his father's house. At this time, it will be seen (by reference to prisoner's testimony) that deceased was in the enjoyment of her usual health, which was good. During a visit to her aunt, on the Saturday before her death, deceased ate heartily, and returned to the house of the prisoner's father in the evening.

The next day, we find her partaking of her usual meals—breakfast in the morning, dinner at three p.m. In the evening she attended divine service, at a church about three miles distant, returned between nine and ten o'clock, read for the family from the Bible and also a religious paper, and retired to bed with her husband about ten p.m.; laid and talked about an hour, and went to sleep at her own request that they should cease talking. About two o'clock a.m. (Monday) he awoke (from noise in the barn) and found her dead, and lying in the center of the bed, at full length on her back, with her hands either crossed or lying down by her side. The bedclothes covering her person, and in all things appearing as if she had been carefully laid out for burial. The prisoner occupying the back of the bed against the wall (a

narrow, old-fashioned, corded bedstead at that,) and calling for a light without changing his position, except he sat up as the family came into the room with the light. The room was in the northwest corner of the attic portion of the house. The prisoner and deceased had, until the last night or so, slept on the first or principal story, and in (below stairs) the southwest corner of the house, in which room also slept two of the sisters of the prisoner. For some unknown reason their sleeping apartment was changed, and for two or three nights previous to her decease, she and prisoner slept in this attic bedroom.

Early next morning the body of deceased was removed to her mother's, (about six miles distant.) The prisoner followed the body. On the same day (in the afternoon) a coroner and physician are summoned from the city; a coroner's jury is empaneled, and prisoner's testimony taken the same evening. His relation of the circumstances of deceased's death was so extraordinary that a post-mortem examination was demanded by the jury.

Among other things, prisoner told Mr. Aley (deputy-sheriff) that when he awoke she did not move; he tried to move her with his hands, but she was stiff; and in this connection stated that she was well, and her appetite as good as usual. The following morning (Tuesday) the dissection took place, during which the prisoner was uneasy and anxious to know what the physicians and coroner were doing. He inquired of a person, (whom he supposed knew,) "what they are doing, and what they find?" Being told that they were taking out the stomach, and that it was not known that they had found anything, he remarked: "One thing I do know, they won't find arsenic." The prisoner made another remark to Mr. Aley (deputy-sheriff) when he was about to arrest him; prisoner said: "Suppose they put poison into her stomach yesterday, can it be known or ascertained?"

The week previous to his wife's death, prisoner was in several drug stores about Albany, searching for the most subtle poisons, one of which was prussic acid, but did not find it at the store inquired of, (Springstead & Bullock's.) On Saturday (as his wife died on Sunday) he went into another drug store, and some time during the same week a person answering the general appearance and dressed in a costume corresponding with the ordinary apparel, etc. of the prisoner,

bought of the druggist Burroughs an ounce of the tincture of aconite; and Burroughs swears he believes the prisoner was the man.

So, also, when prisoner was being examined before the coroner, the evening after his wife's death, he was asked "when he was in Albany?" and answered: "Two weeks ago last Saturday." Upon being further questioned, as if thinking, he finally said: "I believe it was a week ago last Saturday;" while upon being questioned still more closely, he remembered that "it was last Saturday;" (this was on the following Monday.) He stated that his business in town was to take a load of logs to mill, (this mill is about two miles from the city,) and that while in Albany he stopped at several places, but did not mention a drug store; while on being questioned as to whether he was in a drug store on this Saturday, looked up as if startled at the question, hesitated, and finally "did not remember."

In the summer of 1851, following his marriage, he made a promise of marriage to a young lady, (in Schoharie County,) who afterward wrote a note to him at New Scotland, announcing her preparation for the marriage, and urging him to redeem his promise, and this came to the knowledge of deceased. Mr. Van Deusen died on the fourth of October, devising all his property to his wife during her lifetime, and on her death one-half to his son and the other to his two daughters. Prisoner's wife told the prisoner that whatever might come of her share, he (the prisoner) should never have it. After Mr. Van Deusen's death she charged prisoner with being a thief, and with gambling at different places. He (about this time) asked deceased if he should get her some medicine. She answered, no. He urged the request. She again replied: "No! last summer you got me some poison and I would not take it and burnt it up."

In connection with the moral testimony, it may not be amiss to give a few quotations from the address of Levi S. Chatfield to the jury, as embodying his views upon the medical, moral, and circumstantial evidence in this case.

"We find the deceased lying in the middle of the bed; the prisoner sitting up in the back part of the bed; she lying perfectly natural, with her hands folded on her breast, the bedclothes and her own apparel smooth and undisturbed; nothing, in short, to indicate the mortal agony, the death struggle of the separation of soul and body; but there she lies, like natural and peaceful sleep, with not a ripple in her glossy hair, nor the dis-

tortion of a limb to show that violence preceded death.

"At this stage of the case we are called upon to show that this death was not the result of natural disease, but that it was the effect of violence. This is deducible from the conduct of the prisoner and the family on that occasion, and the external appearances of the body, as well as from the medical and chemical evidence. I believe this death not to have been a natural one, from the conduct of the prisoner and the family on that eventful night. I ask you to believe nothing whatever with regard to the complicity of the other members of the family in this tragical affair, and I would to God that I could not; but a horrible suspicion has fastened itself on my mind, which I cannot shake off. But the acts of all are important, so far as they bear on the question we are considering.

"You find the prisoner sitting in the back part of the bed, and saying or doing nothing. Counsel says he was paralyzed. How, then, could he call out? Why, gentlemen, who that knows anything of the workings of the human heart does not feel that, had he been innocent, he would have jumped out and rushed for a light, instead of calling for it. But no! there he sat, as calmly and undisturbed, from all accounts, as though it were a dog which lay dead beside him. This fact is full of significance. Now we do not know how long he sat there. There is no evidence of the time. What was the conduct of the family? Not one word was lisped then among them in regard to her death! They did not believe her dead, they say, when they first reached the chamber. They made efforts to revive her, they say, but not one word was uttered among them in regard to sending for a physician, nor for the neighbors, until they *knew* she was dead. Why, gentlemen, what would you do, were you to wake up and find your wife lying as though dead beside you? I am certain that my first act would be to spring out of bed, and my first thought to send for a physician. Dead or not dead, I would see what could be done to revive her; and, whether the physician was far or near, I should send as speedily as possible irrespective of distance; and so would you, gentlemen.

"Another singular feature in their conduct:—What was it that made all these people look under the bed, and look into the chamber, and all know so exactly what were the contents of that chamber? Who would, if they were attending the dead, prowl around in this way? What motive induced them to be so singularly curious about this particular vessel and its contents, and why were they searching the room to ascertain that no vessel of any description was to be found there? Why were they looking for things of this description at all, instead of devoting their attention to the deceased, unless a horrid suspicion provoked this most unnatural curiosity?

"There is another piece of evidence, and it too is significant: what became of the candle with which John went to bed, and which was left for

him on the table in Matthew's room? What became of that candle? for it is sworn that there was no candle there. Now, if there had been a half-burnt candle there, remembering all the circumstances, would they not have noticed and remembered that? Was not that candle employed in concealing the evidences of the night's damning work, and was not this the candle seen by Wendell Oliver?

"Now when she was dead her face was found to be swollen. This is sworn to by those who knew her well. This is important, as characteristic of the effects of aconite. Another is the unusual rigidity sworn to by Matthew and several other witnesses, including the prisoner, and also what the old lady said about the jaws—that she tried to open them, and could not.

"If Matthew is to be believed, there was a marked and unusual rigidity of the muscles; and this is a characteristic of the poison. I care not how much he may now seek to qualify his testimony. She had been dead but a few moments, the body was still warm; and yet he found the limbs stiff. Counsel have tried to explain this, but the attempt seemed very like a cry of woe, 'that all was lost.'

"There is a marked difference between ordinary cadaverous rigidity, always present in a greater or less degree in the dead, and that sudden rigidity resulting from muscular contraction and produced by spasmodic action. This distinction is readily perceived by the practical eye, and is never found in the bodies of those who have died of natural diseases.

"That it existed here, we have the evidence to which I have called your attention; in addition to which you will recollect that the prisoner told Mr. Aley that when he woke up he found his wife stiff.

"There is another question bearing upon the pathological evidence in this case, and that is the evidence of Mr. Meads. He says, when he first came in he put his hand upon her heart, and thought he felt a fluttering; but the second time he did so thought he was mistaken. It will be for you to say whether he felt the heart flutter, and it is my opinion that he did. This action of the heart is continued for some time after respiration has ceased (and *vice versa*) in poisoning by aconite, and seems to be one of the characteristic effects of that particular poison.

"The external appearances to which I have thus far called your attention, were all noticed before the removal of the body from Hendrickson's, and within a short period after her death.

"Deceased's mother, Mrs. Van Deusen, noticed an unusual pallor. She says there was rigidity, and also a swelling of the face, around the lower part; and there was a constricted, retracted appearance of the lower jaw.

"Now, upon the hypothesis that aconite produces contraction of the muscular system, these appearances are synonymous with its effects.

"She also tried to move the arm, and, when lifting it, it flew back—this is called elasticity,

and almost always accompanies death by the poison of monk's-hood.

"Another thing which was noticeable about the body, and which I say is characteristic of this poison—aconite—is the blueness of the lips, noticed and sworn to by the witnesses.

"There is another thing, gentlemen, which speaks volumes in this case, and it is that ecchymosis, or spot upon the lip. What was it? Where was it? It was a bruise about the size of a sixpence, inside of the lower lip, a little to one side; and it was a cut. Now, how came that wound on the lip? The medical men say it could not have been produced after death; and how came it there? Even had she contemplated suicide, I shall ask you how it came there? for in doing this it never could have occurred. That cut was inflicted when the phial was placed to her mouth; was inflicted when the fatal dose was forced down her throat. The sore lip, which it is said she complained of on Saturday, (if there was a word of truth in that absurd story,) would not account for it, for it was a flesh wound. It has not been accounted for, and, while it stands unexplained, is of fearful moment to the prisoner; it is most pregnant and conclusive evidence in this case, and is one of those incidents which traces out a murder; and it seems as though there was a Divinity which by these things, small in themselves but great in their connection, trace out a murderer and reveals his crime. This bruise tells a fearful tale.

"The conduct of the prisoner and family again become important. Let us recall his position and deportment. When found, he was calmly and quietly sitting up in the back part of the bed, and his wife lying dead before him. This calmness was unnatural; it was such conduct as admits of no explanation on the hypothesis of his innocence; and was altogether too stoical for weak human nature. No feeling, no emotion was manifested. We have no evidence that a tear was shed in that chamber of death. The whole scene speaks of some terrible calamity which, by overwhelming them, had dried up the fountains of grief.

"The counsel says the deepest grief is not loud. But I don't like to see a dry-eyed mourner; I always doubt the man or woman who can see loved ones lost to them, and do not shed a tear. In a true heart the great outlets of grief will bubble up and tears will flow; a true heart cannot restrain the promptings of nature.

"It has been said, by counsel, that prisoner has said she was dead; he had good reasons to say it, and to know it also. He sat there in bed manifesting no emotion or feeling. There he sat and continued to; it is true, he shook her, and said—'Maria! Maria!' Gentlemen, I say this is not natural, not according to the feelings God has implanted in the human heart. If he had murdered her; if he was so hardened as to have poured poison down his wife's throat, I should expect no more feeling from him. I would to God that another horrible feature of this night's

transactions had left no trace on my mind—that I could rid myself of the hideous impression!

"According to the evidence, Matthew came up with a light, and there he stood at the foot of that bed of death, the prisoner sitting up; and there they stood, these two brothers, looking at each other, not one word exchanged between them, not one remark; but there they stood looking at each other!

"Gentlemen, if that chest, on which the prisoner afterward sat, could be made to give up its secret, there, in my opinion, would this horrible mystery be fully unfolded. Doubtless it contained the damning evidence of his guilt; and it was for this reason that he obstinately retained his place upon it. When the neighbors came he still sat there, maintaining an unbroken silence; occasionally, apparently, sighing as described by Mr. Meads.

"The whole proceedings leave an impression which is most painful. If that scene could pass before some magic mirror, we would have a picture such as we may now imagine.

"Now, this man's account of the death of his wife is a strange one. He tells two different stories to Stephen Van Deusen, both in a careless, unconcerned way, as though no wife were dead, and as though she were not then lying unburied beneath her mother's roof. It will be remembered that Van Deusen and the prisoner went from the wood-house to the barn, and in a short conversation at the barn he gives two relations of the manner of the death of his wife. In one he says they went to bed at 10 o'clock, and he woke up at 2; and in the other, told but a very short time after that, they went to bed at 11 o'clock, and he woke up at 3. If the story was true at all, there would have been no difficulty in making it a straight and consistent one.

"Now, as to his examination before the coroner's jury, though it reveals matters which are falsehoods in themselves, yet they act as truths in this case. Here he denied being in any drug store in the city the week preceding his wife's death; and when the inquiry was made whether he had been in a drug store in Albany, he gave a singular start which betrayed alarm. Now he had been in one, as has been clearly proved. Gentlemen, when a party raises a falsehood in a case, it is a presumption against him. Why did he deny it? Because he already felt that his crime was suspected, because then the image of his murdered wife came up before him; because he felt that it was a telling fact against him!

"First, gentlemen, the matter of that sore lip is a fabrication; it was all false. That was not the sore she is said to have complained of, and those who swore to it knew so; it was all false from beginning to end; and this bruise is alone accounted for as I have before stated to you.

"The second fabrication was that in relation to John's speaking to his mother in the room in regard to his wife's death. All the witnesses, Matthew, his wife, and Maria, say that no ques-

tions were asked, and that not a word was heard there or said about it. I said it was a fabrication; and I verily believe, if the old lady had been called when Maria was, we would have heard nothing of it. But after her examination it was found necessary to patch up something to cover the weak point exposed, and the old lady is made to remember this conversation.

"Another fabrication is about prisoner not being in town on Tuesday, and to prove the falsehood we have three disinterested witnesses. Shall we believe them, or shall we believe those relatives who stand in such a peculiar situation in regard to the prisoner, and who are again brought on the stand, and at a late hour, to swear to it?

"Another fabrication, and this also attempted to be proved at a late stage, was the statement of Matthew, that the day himself and prisoner were in town together, he left prisoner in front of Springstead's drug store, and went on to the widow Hendrickson's in Pearl Street, where, in about five minutes, he was again joined by the prisoner. Now I say that the prisoner did not go at all to the widow Hendrickson's, or within any such time as Matthew says, for he was seen to come out of the store and go up Pearl Street, and could not have met Matthew within many minutes of that time.

"Now, gentlemen, as to the matter of prisoner's wife eating her meals on the last Sunday. From all the evidence in regard to this, it is very clear that they desire to create a false impression as to her state of health; but it has failed to leave any conviction on my mind that she did not eat her usual meals, and I think it has also failed to satisfy you of its truth."

Extracts from Judge Marvin's address to prisoner:—

"The jury have considered your case with deep solicitude. Your zealous and able counsel have not, for three weeks, sought natural repose before considering the power, force, and effect of every syllable of evidence adduced through the day, nor without endeavoring to anticipate and to prepare for that which might be adduced on the morrow. The Court has been solicitous to commit no error." * * * "My mind has been oppressed and appalled at the magnitude of your crime. It has been said, well and eloquently by counsel here, that the murder of which you are accused was one of great peculiarity. You employed, for the purpose of accomplishing the deed, a deadly poison—an active vegetable poison, peculiar in its character, and difficult of detection; and I greatly fear that he who communicated to you the knowledge of poisoning by aconite, communicated to you also the difficulty of its detection. Relying upon this information, and confident that the instrument of your crime would be forever hidden from human eye, you committed the fearful deed. Empirics and quacks, though they may learn enough to do mischief, and even acquire the requisite knowledge to use as a medicine a deadly

poison without always producing fatal results, often fail in acquiring the knowledge which enables men to avoid evil, and to know the force and power of the material which they use.

"I refer thus prominently to the opinion that there are poisons which cannot be detected, because I desire to impress, not only upon you, but upon all, the fact that as science advances—as it unfolds to the student the great storehouse of knowledge, and lets man penetrate into the very arcana of nature—that, as it advances, step by step, it enables its votaries to detect the most subtle poisons, and to trace the very footsteps of crime. Chemists are enabled now, through the wonderful developments of science—and science detects your crime—to detect almost all poisons, whether vegetable or metallic, to trace out cases of poisoning (no matter what may be the character of the poison administered) with almost unerring certainty. And it is as dangerous to attempt murder with the most subtle vegetable poison, and as certain to be detected, as if the murder were committed with the dirk or the stiletto. Your case may have its moral effect upon community in this view of it. Community should understand that the crime of murder cannot be committed, in this day of light, in any manner or by any means, without leaving the evidence of guilt; and this evidence always points out unerringly the guilty individual.

"But there was left a piece of evidence in the case, which indicates, with a certainty almost unerring, the mode and manner of her death. I do not now allude to the scorched path which has been traced out by science in the alimentary canal—a path scorched by the liquid poison which you administered—but I refer to the mark left upon the lip of your victim. Little, very little has been said about that mark, although it has been alluded to, and commented on by counsel, and very properly. To my mind, sir, it has been the strongest piece of evidence in the case; I will not say strongest, because this might appear to be casting some doubt upon the medical testimony which has been adduced. But it is to my mind overwhelming. Science can tell us whether such a wound occurred before or after death; science, from the indications apparent, says that it occurred before death. That wound was as large as a six or ten-cent piece, and had within it a cut a quarter of an inch in length. What explanation has been given in relation to it?

"We know, however, without the aid of science, the consequences of such an injury. It produces excessive pain in a living subject. If there had been such a wound on the lip on the day preceding her death, every member of the family would have known it. How was that wound produced—how caused? This was a terrible question for you to answer. It has been answered by the jury. It can only be answered on the hypothesis that you inflicted this injury by forcing the fatal liquid into her mouth before death. I refer to this, not for the purpose of bringing before your mind the fearful scene of

that terrible night, but for the purpose of inculcating that truthful moral that 'murder will out;' that man cannot shed the blood of his fellow-man without leaving traces by which his fellow-men may detect the crime.

"I will not attempt to paint the scene in that room that night. I hope that no mortal eye saw it or knew aught of it, except yourself and that frail being whom you violently sent into another world—whose spirit took its flight at your command—uncalled and unbidden by its Maker."

Upon this moral, medical, chemical, and circumstantial evidence, the prisoner was convicted of the crime of murder, and sentenced to be hung. A certiorari was allowed by Hon. Wm. B. Wright, on application of the prisoner, and the case was taken to the general term of the Supreme Court for review upon exceptions taken at the trial. After full argument before that tribunal, the Court affirmed the judgment of the Court of Oyer and Terminer, and thereupon the case was, on the application of the prisoner, removed to the Court of Appeals (the highest judicial tribunal of the State) for further review. Here, again, the case was most ably argued; and this Court, after the most careful deliberation, affirmed the judgment of the Supreme Court and the Court of Oyer and Terminer, and returned the case to the latter Court for execution of judgment. Sentence of death was thereupon again pronounced upon the prisoner, and in pursuance of such sentence he was executed on the fifth day of May, 1854.

It will be perceived by this statement that the life of the prisoner was protracted, by the various appeals taken by him, for over eight months after the date first fixed for his execution. During which period, the friends of the prisoner were indefatigable in their attempts to forestall or influence executive action in his favor, by ex parte and unsworn statements and opinions of physicians, all, at least partially, and some we have reason to believe wholly, unacquainted with the medical and chemical appearances upon which the opinions of the medical witnesses for the people, as to the manner and cause of death, were founded. These counter-statements and opinions were not only presented to the governor, but were instantaneously offered to the public through various newspapers with the evident intent thereby to create a false and unfounded sympathy for the prisoner in the public mind, and thus secure another appliance to be used in influencing executive action

(should the opinions themselves fail,) by the agency of public opinion.

We deem it, therefore, not only a matter of interest to the profession, but an act of justice to the witnesses whose evidence was thus sought to be impeached, to copy in this connection such portions of the statements and opinions so used, as seemed perhaps at the time, from the high standing of the gentlemen making them, to have been entitled to consideration, either at the hands of the executive or the public. And in furtherance of this object, also to copy from reviews of those statements and opinions made immediately after their publication, by gentlemen of the highest reputation in both the medical and legal professions.

This trial was reported and published in full by Barnes & Hevenor, a copy of which was transmitted to Prof. Geoghegan, of Dublin, who returned the following able and comprehensive review of the same:—

"ROYAL COLLEGE OF SURGEONS, IRELAND, }
December 5th, 1853. }

"DEAR SIR:—Accept my best thanks for the report of the very important case of Hendrickson.

"Having with much care considered the medical facts in their relative bearings, I have to state that they appear to me to establish clearly that the death of Mrs. Hendrickson was the result of the ingestion of poison, while they afford the strongest presumption that the special substance employed was aconite.

"When we find, as in the present instance, a young, and, with immaterial exceptions, previously healthy woman, dying after an illness, at the most, of four hours, and possibly much less; when we learn that five hours before she was discovered dead, she had been in good health and spirits;* when a careful autopsy reveals† an empty state of the heart, slight congestion of the surface of the brain, signs of considerable irritation of the mucous coat of the stomach and small intestines, the remaining organs in a natural state, and the blood for the most part fluid; when, further, by processes which do not generate poisonous matter, a substance is obtained which produces marked symptoms of poisoning in an animal similar in its organization to man, we have, I apprehend, data sufficient to establish the fact of death by poisoning, even though the symptoms were not observed during life.

"In the present instance, the appearances generally tend to show that the proximate cause of

death was syncope.* That the last-named condition was not the result of mental emotion, or of mechanical violence, but, on the contrary, of the operation of a powerful acrid and sedative‡ substance acting on the heart through the channel of the stomach, is proved—1st. By the absence of any sign of violence sufficient to cause death. 2d. By the appearances of irritation in the alimentary tract. 3d. By the observed physiological effects of the substances obtained from the latter quarter.

"The possibility of death from epilepsy, or simple apoplexy,‡ is negated by the fact that the former never proves fatal on the first access, (and when fatal, with different *post-mortem* appearances,) while the existence of the latter can be suspected in those cases only where the other organs afford no reasonable explanation of the assumed or observed disturbance of the cerebral functions during life. Simple apoplexy, moreover, rarely, if ever, destroys life in four hours.

"The absence of any sign of disease or cause of obstructed venous circulation in the adjacent organs, the empty state of the stomach,§ and the early performance of the autopsy,|| sufficiently attest that the appearances in the alimentary canal were not of a pseudo-morbid or cadaveric character.

"The foregoing considerations, in my judgment, clearly establish that *Mrs. Hendrickson's death was the result of the ingestion of a narcotic-acrid poison.*

"As respects the special substance employed, the analysis (when collated with the maximum duration of deceased's illness) shows that it was not of a mineral kind. Animal poison is obviously out of the question.

"It, therefore, but remains to consider what vegetable matters are capable of causing death in four hours; of leaving behind in the stomach and small intestine marked signs of mucous irritation; of producing, when applied to the tongue, an acrid taste, followed, after an interval of some minutes, by a sensation of numbness, and when

* I could cite numerous cases in which the cavities of the heart have been found empty, while the symptoms clearly indicated death by syncope. Five are given by Dr. Wright, (*Pathological Researches on Suffocation and Syncope*.) Some also in *Lancet* and *Medical Gazette*. The presence of blood or fibrin and clots is, according to my experience, to be expected only when the syncope has been partial, and life prolonged at least for some hours. In Mrs. Hendrickson, syncope may have supervened rather suddenly, as the sequel of other effects of the poison, and speedily terminated life, especially if the dose was considerable.

† Vide Fleming on Aconite, p. 43, as to the influence of the poison in producing death by syncope.

‡ From the present state of knowledge on this subject, it is probable that some, at least, of the cases described by Abercrombie, were in reality instances of narcotic poisoning, or were symptomatic of Bright's disease of the kidney.

§ In reference to objections on the score of coloration of the mucous membrane and mucous by gravity, putrefaction or the presence of colored contents.

|| The admixture of the matters, obtained by Dr. Salisbury, with meat, was likely to have diminished their activity, both by enveloping the poison, and perhaps in part by the action of the gastric juice in modifying the influence of the latter. (Vide Fleming's Experiments, loc. cit., p. 104.)

* Witness Louck, Report, p. 26.

† I consider the condition of the gall and urinary bladder, the alterations in the uterus, in the cerebral arachnoid, together with the characters of the rigor-mortis, as quite unessential elements in the inquiry.

administered, even under unfavorable conditions,* to a cat, giving rise to choking, efforts to swallow and vomit, muscular twitches, prostration, and well-marked stupor? I know of none but aconite, or its active principle, aconitine.

"The difficulty, if not impossibility, of separating completely animal matters soluble in alcohol, from vegetable active principles dissolved in the latter, renders, in my opinion, Dr. Salisbury's experiments with acids on the alcoholic extract of the tissues, especially if taken *per se*, less conclusive than they might otherwise prove, and the doctor appears to have exercised a wise discretion, in reserving the small quantity of the poison at his disposal for the important physiological experiment detailed in his able evidence, instead of expending it in the attempt at identification, by endeavoring to elicit the entire series of reactions which, even when yielding affirmative results, does not, perhaps, of itself suffice to establish the presence of the alkaloid.

"The evidence, therefore, of the presence of aconitine in the case before us, rests conjointly on the sensible properties, (appearance and taste,) the physiological action of the substance obtained, and the identity of the appearances observed in the stomach and small intestine of deceased with those to be found in the corresponding organs of animals poisoned by aconite.

"The presumption created by this evidence falls little, if at all, short of certainty. The preceding appears to me to constitute the legitimate judgment on the medical facts; the jury, however, drawing their conclusions from the entire body of evidence, are clearly entitled to affirm, by construction, the certainty of the special agent presumptively indicated by competent medical testimony.

"That the poisoning, in the last place, was homicidal, is rendered probable to the medical inquirer by the existence of contusion and laceration on the inside of the lower lip, by the posture, covering and *locus in quo* of the body, and, negatively, by a consideration of the previous state of mind, habits, and conduct of deceased as they appeared in evidence.

"To determine the perpetrator of the poisoning, (although occasionally, under peculiar circumstances, falling within the range of medical inquiry,) was, in the present case, exclusively the province of the jury, the soundness of whose

verdict there appears no reasonable ground to question.

"The mode in which the case was investigated by the medical and legal authorities reflects much credit on both.

"I remain, dear sir, faithfully yours,

T. G. GEOGHEGAN, M.D.,
Professor of Forensic Medicine,
Royal College of Surgeons, Ireland.

"Dr. SWINBURNE, Albany, N. Y."

The following review of the letter of Alonzo Clark, Professor of Pathological Anatomy, N. Y., by A. J. Colvin, District Attorney of this county, was published May 1st, 1854, *Journal, Argus*, etc. In this review it will be seen that Mr. C. makes no attempt at elucidation, but confines himself to Dr. Clark's abuse of medical witnesses. The reviewer says:—

"The letter in its very inception is deceptive—it is addressed to our eminent townsman, Dr. T. R. Beck, and one would be led to suppose, from its phraseology, that Dr. Beck had requested his opinion in regard to the Hendrickson case. I am assured that this is an utter fiction, and that so far from Dr. B. asking Dr. C. for his opinion, he never thought of such a thing, and did not know of the existence of the letter until he saw it in print. The opinions of Dr. Beck upon the Hendrickson case are well known, and he has never disguised but often expressed them. He believes that Mrs. H. came to her death by violence—that the violence employed was poison, but that the poison was prussic acid, and not aconitine. In this I think he is mistaken, but that is matter of little moment, whether the poison were prussic acid or aconitine; in either case the conviction was right. But to return to Dr. Clark. He will not say that the medical witnesses for the prosecution have produced the condemnation of an innocent man. With his guilt or innocence, 'he has nothing to do.' Why not? If the medical witnesses for the prosecution were wrong, then Hendrickson was unjustly convicted, and the medical witnesses produced his conviction. What was his motive in writing the letter if it was not to overthrow the people's medical witnesses? Dr. C. admits that *if the presence of aconite in the blood, stomach, and tissues were conceded, the post-mortem appearances would sustain such admission—in other words, that the post-mortem appearances were just such as aconite would produce*. Is not this precisely what Dr. Swinburne swore to—neither more nor less? But Dr. C. thinks Dr. S. abused the confidence with which courts of justice so often compliment the men of science, because without having found the aconite in the blood, stomach, and tissues, he yet ventured to express the opinion that it had been present, which Dr. C. would not have done until after it had been found, although the marks were unmistakable that it had been there!

"Dr. C. says that the condition of the stomach, intestines, gall-bladder, urinary bladder, muscu-

* It is obvious that a comparatively large quantity of the poison (and in a very pure condition) would be required to establish that the substance obtained was a white, translucent, granular, non-crystalline mass, unalterable by air, destitute of smell, having a bitter, acid taste, followed after an interval by numbness of the tongue; fusible, not volatile, but giving out ammoniacal vapors by sufficient heat; with difficulty soluble in water, readily in alcohol or sulphuric ether, the solution having an alkaline reaction, forming with acids uncrystallized salts, which are precipitated white by ammonia and by potash, (the precipitate insoluble in latter), sulphuric acid dissolving it with yellow color, followed on application of heat by a dirty, amaranth red, not colored by nitric acid. The solution colored kermes by tincture of iodine, precipitate white by tincture of galls, yellow by tannin, not by chloride of platinum. It is probable that the animal charcoal in Dr. S.'s experiment retained a good deal of the poison.

lar system, and face, as described by Dr. Swinburne, do not belong to poisoning alone. This is a grave assertion, but assertion only—it is unaccompanied by a particle of proof, and without reference to a single authority. The same thing, I know, was asserted on the trial, but it was denied by the prosecution, who contended, and contended successfully, that although some of these appearances, taken singly, might exist in a case where there was no poisoning, yet that altogether they were never known to exist, and never had existed, except in a case of poisoning. Taylor, in his great work on poisons, says that there is no one symptom peculiar to poison; but, at the same time, there is no one disease which presents all the characteristics met with in a special case of poison. So here—although the defense had free access to the extensive libraries of Drs. Hun and Armsby, and although Dr. A. furnished several books to Mr. Wheaton on the trial, to sustain the position of Dr. C., yet not one of them came up to the mark—they sustained the position of Taylor—no more, no less; and Mr. Wheaton was obliged to abandon the ground in despair. Dr. C. will confer an especial favor on the benighted public of Albany, if he will show any disease to which the human frame is subject which has ever produced and presented all the morbid appearances described on the post-mortem examination of Hendrickson's wife.

“Dr. C. also believes that the congested and contracted stomach covered with reddish mucus, the contracted and congested duodenum, the empty state of the small intestines, the half emptied gall-bladder, the extreme pallor of the face, the slightly swollen tongue, afford no evidence that vomiting had occurred before death, and such would be the unanimous verdict of a jury of intelligent physicians. But suppose the doctor were to add to these the facts that the deceased had been in previous good health, had died suddenly, after having, in the language of Hendrickson before the coroner's jury, partaken of her usual meals, that she had partaken of four meals on the day previous to her death, and two meals on the day of her death, that she was of a costive habit of body, and that she had been without a motion of the bowels for several days, what then would the intelligent jury of physicians say? I will answer. Were they then to render a verdict that she had not vomited, every man of common sense in the community would hoot at them as a lot of miserable dolts.

“If the wife of Hendrickson did not die of poison, Dr. Clark says he will hint at a conjecture for the cause of her death. It is *possible*—mark, he says, I do not say it is *probable*—that her death may have been caused by UREA. Now, what is urea? It is one of the constituents of the urine. When there is a disease of the kidneys, which prevents them from acting so as to carry off this urea, it is retained in the system, poisons the blood, and sometimes causes death. It is ordinarily a disease of long standing, preceded by stupor, somnolency, coma, and sometimes paralysis; and

if not relieved terminates in death, after days of sickness. But upon the post-mortem examination all the organs will be found healthy except the kidneys—*no such appearances will be found as those presented on the post-mortem of the wife of Hendrickson.* And, if Dr. C. had read the evidence of Dr. Swinburne, he would have seen that the kidneys of the wife of Hendrickson were sound and normal.

“Thus ends Dr. Clark, and with him every remnant of doubt is removed, if any remains in the minds of even the most skeptical, as to the guilt of Hendrickson. The very fact that, after so much effort, and such boundless expense, no evidence can be found to shake or lessen the force of the people's case made upon the trial, furnishes proof of the most conclusive character, that the verdict of the jury, which pronounced the doom of Hendrickson, was righteous and true, and will stand the infallible test of time. A. J. C.

“NOTE.—It will be remarked that I have paid no attention to certain resolutions purporting to have been adopted by the New York Pathological Society, on the 26th of April last, of which Jackson Bolton was President, and J. Foster Jenkins, Secretary, for the reason that they give no grounds in their first resolution for the opinions expressed therein; and because, in my comments upon the letter of Dr. Clark, I have shown, I think, beyond question, that the wife of Hendrickson did vomit before death, and in my comments upon the chemical statements of Dr. Hayes, that she was poisoned by aconite, which furnish an answer to the positions of that resolution.

“The second and last resolution of this learned society asserts that Dr. Swinburne omitted altogether to examine the trachea and larynx, affections of which are known to produce sudden death. Now, Dr. S. swears that he has described every organ of the wife of Hendrickson as sound, so far as organic disease is concerned, except the womb. But suppose that he had not, will this very wise body of men tell us of a case where disease of the larynx and trachea made its appearance suddenly, within three or four hours proved fatal, and left behind it, on the post-mortem examination, the excoriated and terrific appearances in the stomach, intestines, gall and urinary bladders, which were presented by those of the wife of Hendrickson? A. J. C.”

Let us see what Judge Marvin, who presided, says, in speaking of the condition of the intestinal track, lip, etc.: “Thus, if you were to go into a field, and see the tracks of a horse, you would at once say that a horse had been there; yet you have seen no horse in the field. The tracks are the circumstances from which the main fact, the previous presence of the horse, is inferred.” And in reference to the dissection, post mortem, in contradistinction to Dr. Clark, he says: “These witnesses might have been called, and simply stated that they made an examination, and then have given an opinion as

to the cause of death. But the proper course was the one that has been pursued, namely, giving a careful description of all the morbid appearances, so that other anatomists and medical witnesses might, from the description of the morbid appearances, be called, and allowed to give their opinions as to the cause of death."

I will add, in this connection, the points of especial importance contained in a review of the letter of David A. Wells and others—written and published in the daily papers of this city—at the time the publication of these *ex parte* statements were made to his excellency, Governor Seymour. I will quote from the reviews published in the daily (Albany) journals of May 1st, 1854, (since Mr. Wells sees fit to parade a perverted statement of this case in one of the small public school chemistries of the day.) The review says:—

"Mr. David A. Wells, whose residence rumor ascribes to be in the highly intelligent and moral Commonwealth of Massachusetts. Who or what he is, we have no reliable information aside from this. Perchance he is a 'respectable physician,' *par excellence*. A philanthropist he undoubtedly is to travel so far on an errand so foolish. He will hereafter be known in this State, if in no other capacity, as that of a somewhat conspicuous not to say ridiculous tool of a clique of designing men, who have made themselves quite generally known in this community. As Mr. Wells makes no point save as chief spokesman, we pass him by for the present.

"We next have the communications of Drs. C. T. Jackson and A. A. Hayes, assayers to the State of Massachusetts. The former is of *opinion*, from the mere reading of the testimony as reported, that the 'presence of aconitine in Mrs. Hendrickson's stomach was not demonstrated.' The latter condemns, totally and unqualifiedly, all the processes by which Dr. Salisbury obtained his results, and, as a matter of course, the results themselves. But what is still more strange, he in one paragraph says: 'The detection of aconite in the fluids operated on is not a matter *dependent on skill*; it is chemically an impossibility from the known character of the body itself.' In another he says: 'But *some* result was obtained, and it accords with experience that both *phosphate* and *lactate* of lime would have been carried from the fluids of the stomach and organs, and would have appeared as the precipitate described. At this point in the analysis, the most convincing evidence might have been accumulated. A substance removed from nearly every other body offered itself for examination undisguised. *Here, when the chemical methods applied would have answered all questions, and forever silenced all doubts, we find the subject unexamined further chemically.*'

"Starting with the wholesale assertion that the

chemical detection of aconitine in the animal fluids is impossible, and after condemning *in toto* the processes of Dr. Salisbury, he closes his strange epistle with the remark that, at a certain stage in one of the very processes, 'the most convincing evidence might have been accumulated, and that the chemical methods applied would have answered all questions, and forever silenced all doubts, etc.' The difference between these statements of the learned doctor, and *flat contradictions*, does not readily appear. For the information of this Assayer to the State of Massachusetts, he is referred to the opinion of a gentleman upon this very subject, to whom, without doubt, he will agree with us in ascribing the highest possible character as authority in this matter. That gentleman is Professor Geoghegan, of the Royal College of Surgeons, Dublin. After referring to the difficulty of a *complete* separation of animal matters soluble in alcohol, from *active vegetable principles* dissolved in the latter, Professor Geoghegan remarks that 'the evidence of the presence of *aconitine* in the case before us rests conjointly on the *sensible* properties, (appearance and taste,) the physiological action of the *substance obtained*, and the identity of the appearances observed in the stomach and small intestines of deceased, with those to be found in the corresponding organs of *animals poisoned by aconite*. The presumption created by this evidence falls little, if at all, short of *certainly*.' The professor characterizes the evidence of Dr. Salisbury as able, and the judgment of the jury in the case as legitimate on the testimony presented. It is quite generally admitted by members of the profession that Professor G. is the highest authority living upon the subject of vegetable alkaloids, to which he has given unusual attention. How his judgment and opinions will weigh against those of the State Assayers of Massachusetts, is left for that 'Highest Court,' intelligent public opinion, to decide."

"The next prominent individual who speaks for himself in the demonstration, is Professor Lawrence Reid, of No. 78 West 27th Street, New York. Professor Reid was a witness on the trial, and is one of those to whom reference has already been made. On this, his second appearance before the Albany public, he finds it necessary to bring a testimonial from the Hon. N. Bowditch Blunt, District Attorney of New York. He feels that he is treading again upon ticklish ground. He has not forgotten the figure he made upon the witness' stand, and as the singed cat dreads the fire, he thought he would cover himself with the mantle of District Attorney Blunt, before he made another venture. But all the mantles of all the district attorneys in the world will not help him. The jury disposed of him, and decided that, however eminent a position as a chemist he occupied in New York, and whatever personal and official opportunities of testing his accuracy as a chemist and his worth as a man Mr. Blunt may have had, yet that in attempting to overthrow the impregnable position of Dr. S. he utterly failed, and stood confounded and overwhelmed.

"We have next to pay our respects to our somewhat eccentric friend, Doctor E. Emmons, of this city, who was also a witness for the defense, on the trial of Hendrickson. The principal features of the doctor's address to His Excellency are—1st, Pathetic; 2d, Homiletic; 3d, Scientific; 4th, Historic; 5th, Demonstrative; 6th, Instructive; and, generally, the production is a non-neutral, double compound known in some nomenclatures as *special pleading*. The doctor's zeal certainly has got the better of his discretion. He has evidently formed his conclusion in the outset, and then ran rampant through a long labyrinth of both physics and metaphysics to find props with which to sustain it. Let us examine him a little. The doctor, with one fell swoop, attempts to annihilate both the chemical and medical testimony offered by the people on the trial of Hendrickson. This chemical testimony was given by Dr. J. H. Salisbury, who was for a time an assistant to the doctor. The medical evidence for the people was principally given by Dr. John Swinburne. Dr. Emmons, in his review covering this whole testimony, aims all his shafts at the devoted head of Dr. Salisbury, whose name is paraded in the doctor's paragraphs something like *eighteen times*. Those who understand the relations of the parties are not at a loss to understand the main point of the wordy address thus ostentatiously paraded before the governor and the public. So utterly blinded did he become to the results of his tests and analysis with aconite, that *he actually swore upon the trial of Hendrickson that a man could drink a pound of the tincture without doing him harm!*

"I shall spend no time in combating the positions of these gentlemen, as they have added nothing to their statements in court. I will only ask why has this formidable demonstration been deferred to this late day? Why has this volcano of 'science' and 'humanity' been allowed to slumber for a full year, while the case of Hendrickson has been prominently before the courts and the people? Why is it now so ostentatiously *erupted*, to the astonished gaze of 'the public who have taken a deep interest in this case from the commencement, and who should have been rightly informed' before now, 'respecting' the merits of the case, of which it suddenly appears they are profoundly ignorant?

"But why is this movement sprung upon public attention at this late period of time? Some of these witnesses have undertaken it to save—not poor Hendrickson—but themselves. It is deferred to a few hours before the execution, in the hope of inducing the hasty and favorable action of the executive by an imposing array of 'distinguished names,' or of beguiling the wretched victim of injured justice, to the last, with expectations of executive interference that no confession should come to sweep away every shadow of doubt respecting the testimony of other important witnesses opposed to the instigators of this farce.

"How it is that so many back tracks have been taken, so many revolutions performed, how it is

that so many of the faculty in our city, who have previously had no opinions, or whose opinions were 'all in their books,' or whose opinions of the medical testimony for the people were once favorable—how all these gentlemen have gone through, so suddenly, the gigantic mental labor of reading and concurring with the opinions of this Dr. A. Clark, is a problem which we shall not now attempt to solve. To one who has closely observed this whole case, with all its attendant scenes and circumstances, the spectacle presented by this last exhibition of gymnastics is truly and emphatically ludicrous.

"We submit that in regard to some documents presented in this remarkable performance, their tone and spirit are not such as befit the cause of truth, or become men who hold themselves up as the representatives, the embodiment, and the defenders of science. The time, the manner, and the temper of this onslaught are conclusive evidence that the cause of truth, of science, of humanity, and of justice, is the last object at which the real concoctors of this scheme have aimed. How far these formidable names will influence public opinion and executive action under the circumstances, we shall soon be able to learn. We doubt the success of the scheme. It is very well plotted but badly executed. The side issues are too unwittingly displayed. Its real objects and aims are too transparent and too contemptible either to merit or meet with favor from any quarter."

In addition I will give the minutes of a case of poisoning by this substance, which in its post-mortem appearances, so far as observed, is quite in keeping with the observations in this case.

In the MEDICAL AND SURGICAL REPORTER, vol. iii. page 557, will be found a case of accidental poisoning by taking a teaspoonful of the tincture of aconite, the symptoms of which were manifested soon after taking it. The characteristic burning in the mouth and throat was felt, followed by great pain and distress in the epigastric region; general numbness and feeling of cold; pulse quick and thready; extremities very cold, nails blue; restlessness so extreme as to prevent the restoration of warmth; some purging—*vomiting continued even to exhaustion*; deglutition soon failed. Heart ceased, and he died from paralysis of this organ in three hours from the taking of the poison. Upon application, the doctor kindly presented me the following additional points, which may not be uninteresting in this connection:—

"Immediately after swallowing the dose (tincture of aconite) a burning, tingling sensation (in mouth and throat) was felt; patient at once had recourse to salt and warm water; vomiting followed; fifteen minutes afterward he took ipecac.

and vomited more freely. With the view of quieting spasmodic action, I gave brandy and almond emulcent. He suffered extremely from spasm of the diaphragm—general numbness and cramps in the lower extremities. The heart's action first suddenly ceased; respiration, or attempt at respiration, continued for a few minutes after; surface of body presented an appearance of 'general pallor.'

"*Dissection post mortem.*—Brain not examined; lungs healthy, some relics of former pleurisy; heart hypertrophied; liver large and congested; gall-bladder small, with a moderate amount of viscid bile in it; stomach much contracted, its mucous coat thickened and congested; intestines were not examined beyond the duodenum; urinary bladder empty and contracted; heart and large vessels were full of loosely coagulated blood."

He further adds, "that the pallor, rigidity, state of stomach, gall and urinary bladders were all in accordance with your observation; but the blood was not quite so fluid. I feel truly obliged for the report of that most important trial, (Hendrickson.) I have read it carefully, and entirely concur with Attorney-General Chatfield in eulogium of medical witnesses for the professional talent and research displayed by them in that extraordinary case."

In conclusion, I will take the liberty of calling attention to certain appearances *post mortem*, some of which I am inclined to believe are common to aconite and strychnia, such as *rigor mortis* and a certain degree of elasticity of all the muscles, which manifests itself when and even before life is quite extinct. This same spasmodic action is extended to the hollow viscera, *i.e.* intestinal track, gall and urinary bladders, heart, etc., which remain contracted for some time after death.

I lately made the dissection of two cases of poisoning by strychnia, where these appearances were very prominent. By reference to the recent cases of death by this substance, *rigor mortis* is noted in the reports as very remarkable, even where the circumstances were unfavorable for its production. I will call attention to the following points as the attendants of death by aconite. The extreme pallor, slight bloating of the face, excessive and prolonged vomiting, (of viscid mucus or bloody mucus, even unto exhaustion,) the frightful convulsions, opisthotonos, tearing of the face with the hands, the clinched jaws, numbness of the extremities, pricking and burning of the tongue and fauces, the profuse cold and clammy perspiration, the spasmodic breathing, frothing at the mouth and nose, the constant

retching and spasm of the diaphragm, the comparative loss of vision, the entire retention of consciousness and a fearful contemplation and dread of the approaching end, the empty state of the stomach and small intestines, and instead of fecal matter is found viscid mucus or slime, or bloody mucus adhering to the mucous coat.

The following effect of full poisonous doses, from the prize essay of Reil, may not be uninteresting in this connection:—

"The vertigo is so great as to render it impossible to walk without staggering; the individual is afraid of falling, and actually falls. The sight is diminished in proportion as the pupil is dilated. At the same time the countenance is pale and full of anxiety, the voice is weak, and a tone of anxiety with fear of death sets in. The pulse becomes decidedly less frequent and weaker, being about forty a minute. The nausea is followed by vomiting, which is succeeded by excessive exhaustion, such as sets in after great loss of blood. After very large doses, the peculiar poisonous symptoms of the drug set in. The distress and vomiting of variously-colored, often bloody, bilious fluids, pain in the abdomen, meteorism, diarrhoea, with tenesmus, are the precursors of the quickly approaching condition of agony. Giddiness and obscuration of the senses give way to complete syncope; speech, hearing, and sight disappear entirely; the respiration laborious and rattling; the pulse and beating of the heart exceedingly weak, scarcely perceptible, irregular and rather accelerated than slow. The countenance assumes the appearance of the facies hippocratica; the skin all over the body is pale, wrinkled, and covered with cold perspiration; general trembling of the muscles, and light convulsions set in, and death takes place from paralysis of the heart and lungs. The more abundant the aconitine in the preparation employed, the more prominently stand out the depressing influence upon the nervous system."

T. G. Geoghegan, Professor of Forensic Medicine, Royal College of Surgeons, Dublin, has given the history of four cases of poisoning by aconite, three of which proved fatal. The symptoms (not noted by himself) and appearances *post mortem*, are noted more carefully (by him) than any others I can find on record, though not as full as I could desire, or as full as their importance requires. In the McMeighan case, a moderate and not fatal dose was administered; while in the McConky case, the quantity eaten was great, and hence the symptoms were more severe and sooner manifested themselves.

In the first, about ten minutes after taking the poison McMeighan experienced a burning in his mouth, throat, and gullet; sensation of numbness,

fullness, creeping in the skin; swelling of the face; distressing restlessness; imperfect vision; stupor, etc.; afterward became speechless; frothing at the mouth; hands and jaws spasmodically closed; occasional syncope; in the course of an hour he vomited and some purging followed, which continued for some time, (from tea-time to between eleven and twelve o'clock, when seen by his physician he was still vomiting,) accompanied with great tenderness of the belly, and *cramps*, (spasm of diaphragm.)

In the second and fatal case, the dose was very large, the symptoms (so similar as not to require a special description) commenced sooner, spasm, vomiting, frothing at the mouth, loss of vision, etc. sooner, while death followed in little over three hours.

Post mortem is entirely in accordance with the case of Hendrickson: Stomach empty, mucous coat smeared with yellowish-gray mucus, muscular coat well developed; small intestines empty, except that they contained a considerable quantity of brown mucus of the consistency of thickly-boiled starch, and chiefly adherent to the lining membrane.

A third fatal case by the same author, where the symptoms prior to death were the same, (death following in about four hours,) while the œsophagus was reddened, and stomach and small intestines empty, and the whole mucous surface covered with viscid mucus.

His fourth fatal case, (in which death took place in about four hours;) the symptoms in life were similar to the others reported by him. No dissection post mortem.

Here are three fatal cases all having the same symptoms during life. Two of them presented, on dissection, empty stomachs and small intestines, and in the place of fecal matter was a viscid mucus, notwithstanding the poison was taken with the meals.

In my experiments on animals all the post-mortem appearances spoken of in the Hendrickson case were a complete counterpart in every particular. The analogy in Dr. McGrath's case, the two cases of Geoghegan, the animals, etc., to that of Hendrickson are so remarkable as to make it exceedingly doubtful about its being a mere coincident. Appearances post mortem of the hollow viscera are so remarkable in the animal, so far as my observations have extended, and so in keeping with all experience where any reference has been had, that I am constrained to

draw the attention of the profession to certain facts, in hopes that some reliable data can be obtained for future observers. The mode of death may exercise some influence as to the appearances post mortem; for instance, death by spasm and exhaustion on the one hand, and on the other syncope. In elucidation of this point, I have condensed the reported cases from Dr. Reil's prize essay, published in 1854, in which I find forty-five cases where aconite in its various forms and a variety of doses had been taken. In all, the effect and symptoms are nearly identical, so far as any note was recorded of them; while dissections post mortem were so imperfectly noted as not to be entirely conclusive. The conditions ante mortem are in many instances carefully recorded, and are essentially in accordance with my observations made on the animal.

Spasm.—Thirty-two of the forty-five were mentioned as having frightful spasm of the hands, feet, diaphragm; some opisthotonos; in others, rigidity of the muscles of the back, neck, etc.; pupils contracted, or dilated; eyes fixed, or apparently protruded; jaws and fauces rigid; imperfect respiration from spasm of glottis, etc.

Vomiting.—In thirty-seven cases vomiting was profuse and prolonged, in some several hours, of viscid mucus, frothy matter, bloody slime, etc.

Face Pale.—In sixteen cases the face was noted as pale, cold, and clammy; as was also the body covered with cold perspiration.

Face Bloated.—In several cases the face was described as being bloated.

Purging.—In eleven cases purging was mentioned as occurring, and in some severe, and particularly during the stage of syncope.

Deaths.—Of the forty-five cases there were eighteen deaths occurring from one to six hours from the administering of the poison; only one of the eighteen lived more than four hours. Of these, five died in three hours, two in four hours, five in two hours and a half, two in one hour, one in two hours and a quarter, one in six hours, and two in two hours, (Mrs. Hendrickson probably lived three hours.) In all these cases the severity of the symptoms was in a direct ratio to the quantity of poison taken, while all vomited where life was prolonged beyond the first depressing or syncope effects of the poison, whether an emetic was administered or not. Of the whole forty-five cases, none are noted as not having vomited, while cramps, etc. were always present and alternating with temporary syncope. From

the history of these, I judge all died from the exhaustion or syncope induced by long and continued retching, vomiting, and cramps.

I have been thus particular in order that other observers might note more carefully their cases, and thus obtain more positive data.

The importance of the subject demands that nothing should be left to chance. The difficulty of positive chemical analysis makes the importance of post-mortem appearances more manifest, while to my mind the points above alluded to are really of such a character as to make them essential elements in the inquiry. At all events, I will present them to the profession for future consideration and observation.

Palatine Defects and their Treatment.

By JAMES E. GARRETSON, M.D,
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DISEASES OF THE MOUTH—Continued.

The Levator Palati.—This muscle arises from the petrous portion of the temporal bone, passes into the interior of the pharynx, and then descends obliquely downward and inward, spreading its fibers out over the posterior surfaces of the soft palate as far as the raphé.

The action of the fifth and last muscle, the *azygos uvulae*, it is perhaps not absolutely necessary to consider—its influence, for separation of the wound, being very trifling.

Section of the *levator palati* is thought to be most easy of performance after the manner suggested by Mr. Pollock. This gentleman first puts the flap on stretch, and then, with a double-edged knife, makes an incision through the soft palate, just on the inner side of the hamular process. The handle is now alternately elevated and depressed, a sweeping cut being made along the posterior surface of the soft palate.

The other anatomical elements of the soft palate are glandular structures, vessels, nerves, etc., all associated, more or less intimately, by connective tissues; but these need not be particularly referred to, as one could not well dissect out the muscles without necessarily familiarizing himself with them. Thus, then, we understand the surgical anatomy proper of the parts—the anatomy as it has relation to cleft palate.

The operation of staphyloraphy was first practiced by a dentist of Paris, La Monier, if I remember the name rightly. It has for its object

the bringing together the separated portions of a cleft soft palate, and the retention of the parts in apposition until nature shall unite them.

The operation consists of four different stages, with an object to be attained by each stage:—

1st. The paring off the edges of the cleft.

2d. The introduction of ligatures.

3d. The bringing together of the freshened edges, and fixing the ligatures.

4th. The relief of any tension on the ligatures that may attend the approximation of the parts.

These are the steps or stages, and to accomplish them various means and instruments have been devised, some good, some bad, some indifferent. The reader curious in such matters will find an admirable and most instructive chapter on the subject in the *System of Surgery*, published in 1851, by Professor H. H. Smith, of the University. In the chapter therein devoted to staphyloraphy, is given a synopsis of the operations as practiced by surgeons whose names have been and are particularly associated with the subject.

An epitome may be made of this chapter by noticing that the operation first suggested by La Monier, in 1764, was revived by Græfe, of Berlin, in 1817, but first methodized and published with the rules for its performance by Roux, of Paris, about 1819. In 1820 a nearly similar operation was performed by Dr. John C. Warren, of Boston, he being at that time ignorant of the views or operations of other surgeons. In many respects the steps proposed by Drs. Warren and Roux correspond, though the means suggested by Dr. Warren are simplest—the operation of the latter being, however, generally regarded as the basis of the various modifications that have since perfected the proceeding.

The instruments prepared by Roux for performing the operation are alluded to as being sufficiently complicated. To execute the manipulations he seated his patient before a strong light, with his head thrown back and supported against the chest of an assistant. The mouth being kept widely open, by means of a cork placed between the molar teeth. The surgeon then placed himself in front, and, with forceps held in the left hand, seized the right lip of the fissure. With his right hand armed with a needle-holder, he next introduced the point of the needle from before backward behind the uvula, in order to traverse the flap from behind forward, at three or four lines from the free edge of the fissure. The needle being thrust in as far as its head, was then

freed from the needle-holder, and seized at its point by forceps, which drew it and the ligature through into the mouth. After permitting a few minutes of rest to the patient, the same manœuvre was practiced on the left side of the fissure with the other needle of the same ligature, the two ends of which were thus brought out into the mouth. In passing these ligatures, M. Roux commenced with the lowest, next passed to the highest, and ended with the middle.

The next step in the operation of Roux was to freshen the edges of the fissure. This he accomplished by seizing the margins, as before, with his forceps, and paring from behind forward.

To tie the ligatures this surgeon commenced by knotting the middle one with the fingers, and after making a simple knot, confiding it to an assistant, who held it with an instrument termed by the French a *serre-nœud*, (knot tier;) he then passed on to the second ligature, and from that to the first, drawing them tighter than is necessary to approximate the edges of the wound, in order to prevent any separation. Eating, drinking, and speaking was interdicted the patient for from two to three days, the ligature being removed on the third or fourth day, excepting the lowest one, which was allowed to remain twenty-four hours longer than the other.

Dr. John C. Warren performed the operation as follows: the patient being well supported and secured, a piece of wood, an inch wide, a little curved at the end, and with a handle to be held by an assistant, was placed on the molar teeth of one side, to keep the mouth open. A sharp-pointed curved bistoury was then thrust through the top of the palate, above the angle of the fissure, and carried down on one edge of the cleft to its extremity, and the same was done on the opposite side, so as to cut out a piece in the form of a letter V, including about a line from each edge. Next a hook, or curved needle, fastened in a handle, with an eye on its extremity, and a movable point armed with a triple thread of strong silk, was passed doubled into the mouth through the fissure behind the palate, and the latter pierced by it one-third the length of the fissure from the upper angle of the wound, so as to include about three lines of the edge of the soft palate. The eye, with the ligature being seen, was seized by a common hook, and drawn out. The eyed hook was then drawn back, turned behind the palate, and the other edge transfixed in a similar manner. A second and third stitch

was now passed in a similar manner, the third being as near as possible to the lower end of the fissure. Then, seizing the upper ligature with the finger, the knot was tied without using a *serre-nœud*, and placed on one side of the wound in order to prevent its pressing on the fissure; the other being tied in like manner, and the fissure closed.

After the first operation of Dr. Warren, Dr. A. H. Stevens, of New York, September, 1826—see *North American Medical Journal*, vol. iii. p. 233—operated successfully, by first inserting the ligatures, and then paring the edges.

In 1827, Dr. Mettauer, of Virginia, operated for staphyloraphy, and in 1837 published an excellent essay. Dr. M. employed leaden ligatures—see *American Journal of Medical Science*—vol. xxi., p. 309.

Allusions are made in this chapter to other operators and operations, but as they are all only modifications of the methods of Roux and Warren, it is not necessary to refer to them.

Several years back, I remember having in my possession a monograph on the subject of staphyloraphy, from the pen of the late Professor Mütter. I regret that I cannot now lay my hands upon it. Dr. Mütter was much interested in the operation, and his pamphlet, as I recall, abounded in cases illustrating his success in this direction.

To Mr. Ferguson, of England, however, more than to any other man, are we perhaps indebted for a scientific appreciation of the requirements in staphyloraphy. The cutting and sewing parts of the operation are simple mechanical manipulations, which are of consequence only as they tax the ingenuity of the surgeon. The proper surgical understanding of the subject consists, as we are prepared to see, in a just acquaintance with the muscular relations of the parts. These relations we have already studied. To Mr. Ferguson belongs the credit of first making these demonstrations. It is very true that before his time incisions in the soft parts had been advised. Roux, Dieffenbach, Mettauer, Liston, and Warren, all practiced them where difficulty was met with in approximating the fissure; but the incision practiced by them, as remarked by Mr. Ferguson, seems to have been without reference to the anatomy of the parts, and as a consequence rendered success somewhat a matter of accident. The operation of Mr. Ferguson, as it pertains to the paring and bringing of the fissure together, is about the same as that practiced by Dr. Warren.

He pares the cleft before inserting his sutures, and his knots are made about as Dr. Warren's.

In looking over the history of staphyloraphy, the reader will be struck with the likeness in complaints, the three principal ones of which seem to be—the difficulty in tying the ligatures; the great tendency of these ligatures to slough out after they are once nicely secured; and the concealment of the parts during operation, both because of deficiency in light and the accumulation of the viscid muco saliva, which in such mouths is secreted in such abundance.

Now, in the direction of operations in and about the oral cavity, I have had that experience, and that practice which will, perhaps, justify me in asserting that there is an easier and more philosophical mode of doing the operation of staphyloraphy than has yet been practiced. To sit in front of a patient and operate in the mouth is most unhandy. The operator is in his own light, besides it is certainly much more difficult to operate sitting than standing; motion is cramped, freedom is interfered with. To operate on the mouth of a patient, when the surgeon is seated in front, makes necessary an assistant, whose office it is to manage the head. This has a twofold objection: firstly, the assistant cannot follow in all those little changes which are so necessary to success. He does not see quickly the shiftings and turnings, which so assist in the manipulations. Again, one is more naturally ambi-dextral when the arms are supported than when they are unsupported. In operating by sitting in front of a patient the surgeon must work at arm's length; he has nothing which shall steady him; no guard either which shall enable him to shield himself against any sudden awkward movement on the part of the assistant or patient.

To make a knot in a deep canal, as the mouth or vagina, is not easy. To fix a ligature by compressing something upon it is very simple. Silk acts as an irritant to human tissue, silver or lead does not; therefore, where it is desirable to retain a ligature for several days or weeks, without irritation, metal is best adapted.

Instruments perfectly suited to an operation simplify it much.

Predicating an operation on these self-evident truths, I commend the following as the best and easiest mode of manipulating; believing, I may assert, that where once practiced, it will take precedence of all other modes of doing the operation.

The instruments required are those belonging to the ordinary vesico-vaginal case. The long-handled knife, needles, and needle-carrier; shot-carrier and compressor, tenaculum; cutting forceps, silver or lead wire; the little perforated flat shot of McLean, and mop sticks. Better instruments than these for the operation of staphyloraphy will not, I think, ever be devised. The instruments arranged on a tray in the order that they are to be used; the patient, having the steps of the operation explained to him, for much is expected from him, is seated on a chair having a movable head-rest—it is well if this rest moves in a ball-and-socket joint; at any rate, it must be movable backward and forward. The ordinary dental chair answers the purpose admirably; when the head is placed on this rest the mouth will be found to look directly upward. The surgeon now takes his position back of the patient, standing on a foot-stool of such height that his breast shall be brought on a level with the head of the patient. If the reader is disposed, he can thus seat a friend, and taking a position back of him, by leaning over his head, he will find that when the mouth is opened he not only has a most perfect view of a perfectly lighted cavity, but by leaning against him, and passing his arms around the head so as to bring the hands to the mouth, he will recognize that, besides having his own arms so steadied as to allow of the easiest manipulation, he has the movements of the patient completely under his control.

Now this relative position of the surgeon to his patient gives him not only the advantages enumerated, but he is out of the way of all expectorative efforts. If saliva and blood should accumulate about the parts at which he is working, he can and will, almost unconsciously, and certainly without effort, so turn the head that, while he does not at all interfere with his own manipulations, he throws the fluid into some more convenient part of the mouth. This, I know, can be done so handily that each step of the operation may be accomplished without the annoyance and delay experienced in using the mop. Certainly a patient so held cannot make any movement too quick or too unexpected for the surgeon. True, he might be so obstreperous that the operation could not be accomplished, but he could not make any movement which the knife of the operator could not naturally follow, and, therefore, any accidental harm could not be done.

Patient and surgeon thus in position, the

tenaculum is taken up and carried through the very point of the cleft pendulum. The part is then put on stretch, and a paring of about a line taken from the whole of that side, cutting from behind forward. The manipulation is repeated on the opposite side. The first stage completed, tinct. of iodine, diluted to about one-tenth its official strength, with wine or water, is given the patient, with which to gargle and wash the mouth. This I find to cleanse the mouth admirably; besides, it is a fine healthy stimulant.

The bleeding arrested and the patient a little recovered, the second step of passing the ligature may be attempted. Take up one of the curved needles, and, threading it with the silver wire, fix it in the needle-carrier. Passing now the instrument into the mouth, thrust the needle through one side of the cleft, about three lines from the margin and about half an inch from the apex of the cleft or hard palate. After passing it to the point at which it is held by the carrier, it is to be caught by the forceps and brought through, the slide of the porte being loosened so as to permit of such withdrawal of the needle from its beaks. This accomplished, the needle is to be replaced in the porte and carried through the opposite side; relieving it from the grasp of the carrier as before, the two ends are brought from the mouth and their relation secured by one or two twists. This completes the first ligature. A second is now passed half an inch farther on, also a third or more, as may seem needed. The manipulations required are of course the same as for the first. This completes the second stage, and the patient is allowed to rest as before. If he needs to wash his mouth, the surgeon must be careful and look after his ligatures.

The third stage, or approximation of the edges is next to be accomplished. Take up the shot-carrier, and, slipping through its fenestra the twisted ends of the first ligature introduced, push the carrier down the wires, and you will find, as it approaches the palate, the edges of the cleft approximate. This I think will always be found to be the case with the ligature nearest the hard palate: the parts come together very easily. You now slip off the carrier and take up one of the perforated shot; put this on the wires, and with the carrier force it down to the palate. Holding it now in place, which is done simply by laying the wires against the carrier and shifting your finger over it, take up with the right hand the forceps, and compress the shot tightly upon

the wires. The parts up to this ligature will now be found nicely approximated and fixed. This completed, repeat the operation on the second ligature. But this will be found, perhaps, impossible, without greatly overstraining the parts and risking the tearing out of the wire.

If this is the case, you at once desist from the attempt, and make the section as described of the tensor palati muscles on either side. Now most likely the parts will come together comfortably; if so, fix them with the shot as before; if, however, an approximation has not yet been secured, nick the anterior half arch, and still, if this does not suffice, cut the posterior and the levator palati; the ligature may then be fixed, as well as those still farther back. Each shot firmly compressed, the wires are to be cut off as closely as possible. Thus the third and fourth steps of the operation are completed, and nothing remains but to enjoin on the patient the most perfect rest. Here lies half the secret of success; the patient should scarcely move for two or three days, certainly he should not be permitted any food that would demand for its comminution the slightest effort of mastication. He should be directed to let the liquids he might take be allowed to trickle down his throat, rather than that he should attempt to swallow them. These restrictions need not, however, be made quite so strict, if in the operation myotomy of the half arches has been performed.

In the old mode of doing the operation, it was found necessary after the first one or two days to remove the ligatures because of their tendency to slough out; the use of silver wire obviates this necessity, as the metal seems to provoke no inflammation. These ligatures may therefore, if they seem useful, be allowed to remain from one to three weeks. This non-irritating quality of the metal ligature is so marked that I have seen them, when applied on varicose veins, as firmly fixed after four months as the first day they were put on. This is the feature which adapts them so admirably for staphyloraphy.

The wounds made in dividing the muscles may be left to nature. If the patient is in condition for the principal operations, he is in that condition which does away with any necessity for care in trifling flesh wounds; if, however, any trouble should arise in such a direction, the practice would be that which would apply to similar wounds, however made.

It is seen that the manipulations here suggested for the cure of cleft palate are precisely the same

as those practiced in vesico-vaginal fistula, and that the instruments adapted to the one are exactly suited for the other.

The position in operating is, I think, a new suggestion, and is founded on, I may say, a rather extended experience in manipulating upon and about the mouth. To me it seems the most proper position for doing easily and comfortably the operation; any advantages it may possess over the old mode of sitting down in front of the patient are so easily studied upon the person of any one, that I trust the suggestion will receive the attention I think it merits.

With this consideration of cleft palate proper, we may pass to the study of other defects of the parts.

Holes in the Palate.—Breaks in the continuity of the palate may be treated in two ways: either by an operation strictly surgical, as reference may be had to the use of the knife, or by means which might be denominated surgico-mechanical. If the knife is to be exclusively used, we have simply to pare the edges of the break, and then get the parts in apposition as best we can. Herein consists the difficulty of such operations, and the tact and knowledge of the surgeon will prove his best guides. If the breaks are in the soft palate, any resistance that may be met with is to be overcome precisely as we would overcome it in staphyloraphy—let the surgeon consider what muscle or muscles oppose him, and divide them as before suggested; or, if myotomy seems scarcely necessary, he cannot unlikely accomplish his purpose by making lateral slits through the mucous membrane alone, or otherwise he may go still a little deeper, making a kind of semi-myotomy operation.

If the break is small, one ligature will perhaps be all that is necessary to secure the approximation of the pared edges, and this suture is to be made and fixed precisely as in the previous operation. If more than one suture seems indicated, why, of course, two, three, or more are to be employed.

Defects in the hard palate are also amenable to surgical skill; they may be remedied by the use of the knife and stimulating local applications, or if these fail, an artificial palate, properly constructed, will so admirably supply the deficiency that the patient is rendered quite as well off as his fellows.

Using the knife alone, most successful results

are frequently attained by first paring the edges of the break, and afterward dissecting the parts freely from the bone. This mode of operating is admirably suited to such hard palates as have a thick, soft, mucous membrane. By such a mode of operating, and with such a mucous membrane, quite wide chasms may be easily spanned.

With mucous membrane of this character, plastic operations will be found to answer very well. It is quite easy to get a flap without disturbing the periosteum, and such a flap may be twisted on its pedicle without any special interference with its function. The pedicle, however, should be as wide as possible, remembering that the circulation pertains to the basement membrane alone. An objection, however, to such operations in the mouth, is the difficulty that attends the fixing of the flap in its new place.

The next mode of relieving these defects that may be alluded to, is that originally suggested by Dieffenbach. This surgeon commends the penciling of the edges of the break with tincture of cantharides, hoping thereby to excite granulation to an extent that shall fill up the cleft.

Now, while this mode, as practiced by Dieffenbach, does very well for small holes, it seldom succeeds with the larger. The granulations, having nothing to support them, break down before connecting in the middle.

This defect in the treatment can be remedied, and success almost warranted, by the following modification: Make a simple obturator or artificial palate; the mode of doing which is described a page farther on. After fitting this so as to fit accurately every portion of the hard palate, it may be removed, and the cleft pared; next, touch the parts with cantharides or tincture of iodine—the latter I prefer. The plate is now to be replaced, and will be found to act most completely as a support to the granulations which will be formed. The process of freshening the edges is, of course, to be frequently repeated; but after the first paring, the cuts may be made from the circle on and not around the cavity.

The next class of palatine defects which may claim our attention are such as require for their relief a surgico-mechanical treatment. This brings us to the subject of the Obturator; an instrument whose style, form and manufacture is of the same interest to the surgeon as is the Pessary to the obstetrician.

To be continued.

The Insertion of the Capsular Ligament of the Hip-Joint, and its Relation to Intra-Capsular Fracture of the Neck of the Femur.

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Continued from page 275.

Figs. 8 and 9 represent the posterior surfaces of specimens 7 and 8, which were taken from the same subject, and are identical in the insertion of their capsular ligaments.

Fig. 8.



Fig. 9.



Fig. 10.



Fig. 10 exhibits the capsular ligament with its insertion into the shaft of the bone, and illustrates the insertion of the morbid capsule in all those cases in which fracture has been followed by absorption of the entire neck. The specimen was prepared by dissection of the normal capsule in a manner to be described hereafter.

From the foregoing table and its illustrative engravings, it will be seen: 1st. That scarce any two specimens of the normal capsule, taken from different subjects, are alike in their insertion into the neck of the bone; consequently no definite

description of its insertion can be given. 2d. That the normal capsules of the opposite femurs of the same subject are alike in their insertion. Having measured twenty-four pairs, I have yet to see a single variation from this rule. Moreover, it is just what we must expect to find, in obedience to that law of symmetrical conformation which pervades the animal economy.

These facts are of great importance in the settlement of the question of bony union within the capsule; for, since the injured bone and its capsule often furnish little or no evidence of the exact location of the fracture, on account of the changes they have undergone since the injury, we are obliged to look elsewhere for facts to determine whether the given specimen be an example of fracture entirely within the normal capsule. This cannot be determined by comparing the specimen with the normal capsule taken from a different subject, since no two capsules taken from different subjects are alike; but may be ascertained by comparing it with the normal capsule of the opposite femur of the same subject, whose insertion into the neck of the bone is exactly the same as the insertion of the capsule into the neck of the injured bone previous to the fracture.

Before entering upon a review of the specimens presented as proofs of bony union of intra-capsular fracture, I propose to consider briefly some of the pathological changes which follow the injury, and particularly the effect of these changes in removing the insertion of the normal capsule; since some surgeons who have written on this subject have regarded the insertion of the capsule of the morbid specimen as being identical with the insertion of the normal capsule, and have considered as examples of union of intra-capsular fracture all specimens in which the line of union was included by the morbid capsule. Thus, Professor March has questioned the authority of Wilson's *Anatomy* in locating the attachment of the capsule at the middle of the posterior surface of the neck, and cites, as proof to the contrary, the appearance of the dried capsule attached to one of his specimens representing union after fracture of the neck. The engraving of this specimen represents the capsule as being inserted into the neck of the bone just within the posterior inter-trochanteric line, and corresponds with his description of the capsule and its insertion, which I have already quoted. The same opinion is also noticed in an inaugural thesis on "Intra-capsular Fractures of the Cervix Femoris," by John George

Johnson, *New York Journal of Medicine*, 3d series, vol. ii. p. 321:—

"There is a single point more worthy of notice; it is the extreme difficulty there appears to be in all these specimens, of deciding whether they are intra-capsular, or only partly within. The mere fact that a surgeon of such eminence as Professor Mussey should have been misled and should have been so deceived as to take a specimen across the Atlantic, to convince Sir Astley Cooper of the possibility of ossific union of intra-capsular fractures, by whom it was conclusively shown that he was in error, is sufficient to prove the difficulty of deciding on these specimens. All such specimens should be preserved in the wet state, with the capsule still attached, when there could be no doubt of their character."

That this conclusion concerning the identity of the insertion of the morbid capsule with that of the normal capsule is incorrect, will be seen from the following observations: First, the *normal capsule* usually has its posterior insertion into the *middle of the neck* of the bone, and *NEVER* as far remote as the shaft. Second, the morbid capsule, after fracture of the neck, often has its insertion into the shaft of the bone.

Two instances of this attachment of the morbid capsule are reported by Dr. John C. Warren, of Boston. He states that in the first—

"The principal object of attention was the hip. On cutting into this articulation, the head of the os femoris was found to be fixed in its socket, being ankylosed throughout with the os innominatum. The neck of the bone had disappeared. The shaft had been drawn up an inch and a half higher than the head, and on the surface corresponding with the ankylosed head a regular, smooth, articulating surface was formed, which was mostly surrounded by an adventitious capsule, shorter and more closely embracing the bone than the normal capsule."

In the second:—

"The muscles about the thigh were thin and wasted, the capsular ligament was thickened, but regular on the outside. On cutting into the articulation, there was no appearance of recent inflammation; the neck of the thigh-bone was absorbed."

The engraving of this specimen shows the neck entirely absorbed, the capsular ligament inserted into the shaft of the bone, and the head of the bone united to the shaft. This Dr. Warren calls "An instance of fracture quite within the capsular ligament, close upon the head of the bone."*

* Cooper on Dislocations and Fractures, Amer. edit., p. 199.

Robert W. Smith, of Dublin, has reported a number of cases of fracture of the neck which illustrate this insertion of the morbid capsule:—

"Case XXV. Robert Donovan, aged eighty, fracture of the neck of the femur within the capsule. The surface of the superior fragment was concave, smooth, and polished; the neck of the bone absorbed, and the cartilage of the head atrophied, and in some places totally removed; the capsule was unusually thickened, and organized lymph adhered to its internal surface."*

The capsule is shown in the engraving to be inserted into the shaft of the bone.

Malgaigne records an instance in which the morbid capsule extended "from the edge of the cotyloid cavity to below the lesser trochanter."†

This insertion of the capsule is fully explained by the resulting changes which follow fracture of the neck; and it will be seen that the insertion of the morbid capsule into the shaft of the bone must follow, as a consequence, the entire absorption of the neck, and that the periosteum covering the posterior surface of the neck external to the insertion of the normal capsule becomes, after absorption of the neck, a part of the morbid capsule which has its insertion into the shaft of the bone.

Robert W. Smith states that—

"In recent cases of intra-capsular fractures of the neck of the femur there are but few phenomena worthy of notice revealed by the anatomical examination of the joint.

* * * "There is generally observed a preternatural amount of vascularity of the synovial membrane, and in some cases a small quantity of blood is found within the capsule, and sometimes coagulable lymph is seen adherent to the internal surface of the capsular ligament. * *

"The capsular ligament is usually greatly increased in thickness, and occasionally osseous matter is deposited in its structure.

* * * "In general, the head of the femur preserves its globular form, and is movable in its socket; but sometimes it becomes adherent to the acetabulum.

"The superior fragment of the broken cervix disappears to the level of the brim of the acetabulum, either in consequence of the action of the absorbent vessels, or by the friction of the broken surfaces, or perhaps it is due to a combination of both these causes. The absorption, however, sometimes extends much further; I have seen half of the globular head of the bone thus removed, and a case has been recorded in which the head of the bone was completely absorbed. In old cases the femoral fragment is likewise ab-

sorbed to a greater or less extent; sometimes it disappears entirely to its base, and the portion of the shaft from which in the normal state it springs, presents a smooth and even surface, limited by the trochanters and their connecting lines."*

When fracture occurs entirely within the capsule and is followed by absorption of the neck, the process of absorption soon reaches that point on the posterior surface of the neck to which the capsule is attached. At this point the capsule is not only inserted into the bone, but also blended with the periosteum which covers the neck external to this point. If the progress of absorption continue, that portion of the neck to which the capsule is attached is soon removed, and the capsule is left, having no other insertion than its connection with the periosteum.

If the whole of the neck be removed in this manner, the periosteum covering it is loosened, thickened by fibrous deposit, and constitutes, by its connection with the normal capsule, a part of the morbid capsule which now has its insertion into the shaft of the bone. If now the fragments be approximated and union occur, we shall have extra-capsular union of intra-capsular fracture, and yet the line of union will be included within the morbid capsule.

It is highly probable that intra-capsular fracture is sometimes followed by union without the capsule, in this manner; but this, if it ever does occur, can never be proven, since the diagnosis of intra-capsular fracture cannot be made with positive certainty during the life of the patient; and it is impossible, after absorption of the neck, to tell at what point the neck was broken. I have succeeded, by dissection of the normal capsule, in illustrating the insertion of the morbid capsule into the shaft of the bone, as seen after removal of the entire neck by absorption. (See Fig. 10.) In the dissection I commenced just within the normal capsule, and, cutting through that portion of the capsule which is reflected upward on the neck of the bone, dissected the capsule loose from its insertion into the neck, leaving it attached to the periosteum covering the neck external to this point. Continuing my dissection outward to the shaft of the bone, I raised the periosteum, which by its connection with the normal capsule exhibits a lengthened capsule inserted into the shaft of the bone.

Numerous specimens have been exhibited, both

* Smith on Fractures, p. 82. See also Case V. p. 50.

† Description of Plate No. XII., Malgaigne on Fractures, Fig. 67.

* Smith on Fractures, p. 41.

in this country and in Europe, as illustrations of bony union of intra-capsular fracture, yet but few if any of these furnish positive evidence that this desirable result has ever been obtained. Of the specimens found in European museums, Robert W. Smith recognizes seven, while Malgaigne admits but three, and Sir Astley Cooper only one. The number of specimens in this country, for which this honor is claimed, is quite equal to the number recognized by Robert William Smith. Of these, Reuben D. Mussey, Professor of Surgery in the Miami Medical College at Cincinnati, Ohio, has three; Alden March, Professor of Surgery in the Albany Medical College, has two; Willard Parker, Professor of Surgery in the College of Physicians and Surgeons in the City of New York, has one; Daniel Holmes, M.D., of Canton, Bradford County, Pa., has one. Others will be mentioned hereafter.

A review of the cases of fracture of the neck, reported by Robert W. Smith, will show us that this eminent writer has claimed, as illustrations of intra-capsular fracture, a large number of specimens in which the entire neck of the bone has been removed by absorption; therefore, we have a right, in discussing the subject of bony union, to regard with some skepticism his cases in which the exact location of the fracture is left dependent on an expressed opinion, and has not been given in the description of the specimen.

In cases x., xi., xviii., xx., xxiii., and xxv., Mr. Smith states that "the fracture was within the capsule," and that "the entire neck of the bone has been removed by absorption." We ask how it is possible for him to tell the point at which the neck was fractured, after the neck has been removed by absorption? We do not feel under obligation to believe the expressed opinion of any surgeon until we know the facts on which that opinion is founded. The first case adduced by Mr. Smith in proof of osseous union within the capsule, is that originally reported by Mr. Langstaff.* The history of this case is quite unsatisfactory, inasmuch as Mr. Langstaff tells us that the bone was fractured, without giving us a single symptom which led him to such a conclusion. The following is the history:—

"In this case the patient was a female aged fifty, when the fracture happened. She was confined to bed for nearly twelve months after the occurrence of the accident, and during the re-

mainder of her life, a period of ten years, walked with crutches. On dissection it was found that the principal part of the neck of the bone was absorbed; the head and remaining portion of the neck were united principally by bone, and partly by a cartilaginous substance. On making a section of the bone, it was evident that there had been a fracture of the neck within the capsular ligament, and that union had taken place by osseous and cartilaginous media. With a view of ascertaining whether there was real osseous union, the bone was boiled many hours, which, by destroying all the animal matter, satisfactorily proved the extent and firmness of the osseous connection, and exhibited the spaces which had been occupied by cartilaginous matter."*

Mr. Langstaff states that "on dissection it was found that the principal part of the neck of the bone was absorbed." From this we conclude that more than half of the neck was removed, and, if so, it is more than probable that the line of union was, at least, partly without the normal capsule, since the measurements of sixty-one specimens of the normal capsule show that its insertion into the posterior surface of the neck is in many instances nearer to the head of the bone than it is to the posterior inter-trochanteric line. The line of union, in this specimen, is undoubtedly external to the normal capsule; yet we cannot say, from this, that the fracture was also without, neither that it was within the capsule, since the fragments of the neck suffered loss by absorption before union occurred, and it is consequently impossible to give the exact location of the fracture. He also states that "on making a section of the bone it was evident that there had been a fracture of the neck within the capsular ligament." This opinion was undoubtedly founded on the appearance of the morbid specimen, while its capsule still remained attached to the bone; and, if so, cannot be considered conclusive, for the exact location of the insertion of the normal capsule must be determined before we can state that the fracture was intra-capsular. We have already shown that the insertion of the morbid capsule, after a portion of the neck has been removed by absorption, is not identical with the insertion of the normal capsule; hence, even though the section of the bone shows that the line of union is included within the morbid capsule, which still remains attached to the bone, it furnishes no evidence that the line of fracture was entirely within the normal capsule.

* Medico-Chirurgical Transactions, vol. xiii. p. 491.

* Smith on Fractures, p. 67.

If, on the contrary, the opinion that the fracture was intra-capsular were founded on the authority of any anatomist who has definitely located the insertion of the capsular ligament, it is still liable to error, since the line of capsular attachment to the neck of the bone is so variable in specimens taken from different subjects that no definite location can be assigned to it.

On referring to Mr. Langstaff's history of this case, I find that he has also reported in the same paper six other cases, as illustrations of intra-capsular fracture, one of which he states, was—

"A transverse fracture of the neck of the os femoris, within the capsule, closely united by ligament. The neck of the bone had been absorbed nearly in a line with its origin from the trochanter."

In four of these cases the neck was "nearly absorbed," and in another he states that the neck was "completely absorbed." In the last case the line of fracture may have been either close to the head or close to the shaft of the bone, or at any point intermediate, and neither Mr. Langstaff nor any other surgeon could assign a definite location to the line of fracture after the removal of the entire neck by absorption. In most of these cases he describes the capsular ligament as being thickened by fibrous deposit, but does not speak of its having an abnormal insertion. After loss of the entire neck by absorption, the capsule is found to have its insertion into the *shaft of the bone*, and there can be but little doubt that Mr. Langstaff regarded this as its *normal insertion*. If so, fracture at any point between the head and the shaft of the bone would, in his opinion, be intra-capsular. We do not doubt the *honesty* of Mr. Langstaff's report, but we must be allowed to question the truth of his opinions, when we find that in six of the seven cases of "intra-capsular fracture" reported by him, the neck of the bone had lost so much of its length by absorption that it was impossible to know whether the fracture had been *entirely within* or partly without the capsule.

No. II. *Dr. Brulatour's Case* is as follows:—

"Dr. James, an English physician. (residing at Bordeaux,) aged forty-seven, was thrown from his horse on the 29th of March, 1826; he fell directly upon the great trochanter, but got up and walked a step or two, which occasioned such acute pain in the hip-joint that he instantly fell again. On examination, immediately after the accident, Dr. Brulatour observed the principal signs of fracture of the neck of the femur, such

as shortening of the affected limb, eversion of the foot, and a feeling of crepitation in the joint when counter-extension was made. Extension of the limb was kept up for two months, so as to preserve it of its natural length. Three months after the receipt of the injury, Dr. James was able to walk with only the assistance of a cane, and subsequently recovered the full use of the limb.

"On the twentieth of December, nine months after the accident, he was attacked with hæmatisis, which proved fatal in two days. The post-mortem examination of the right hip showed the capsule a little thickened, the cotyloid cavity and inter-articular ligament in a natural state; the neck of the femur shortened, an irregular line surrounding the neck, denoting the direction of the fracture, and considerable bony deposit at the bottom of the head of the femur, and at the external and posterior part. A section of the head of the femur was made in a line drawn from its center to the bottom of the great trochanter so as perfectly to expose the callus. The line of union indicated by the callus was smooth, and polished as ivory. The line of callus denoted also that the bottom of the head of the femur had been broken at its superior and posterior part."

Definite measurements of this specimen are not given in the description of the post-mortem appearances in Mr. Smith's work; consequently we have no means of knowing the exact location of the line of union. The history states that the neck was shortened, but does not tell us how much. In most cases of union, after fracture of the neck, it is shown that union did not occur till after the posterior surface of the neck had been nearly or quite removed by absorption. All of Prof. Mussey's cases of union are examples of this kind. Prof. Parker's has suffered the same loss. Mr. Adams's case is another illustration of this change.*

If a great portion of the posterior surface of the neck be removed before union takes place, the line of union will be found without the normal capsule, and in these cases it is impossible to tell at what point the fracture occurred. In Dr. Brulatour's history of the case, the following definite measurements of the specimen are given, which Mr. Smith did not quote:—

The post-mortem examination showed the neck of the femur shortened; "from the bottom of the head to the top of the great trochanter was only four lines, and from the same point to the top of the small trochanter, six lines."† The line of union was at some point between the head and

* See Smith on Fractures, page 59.

† M.D. Chirurg. Trans., vol. xiii.

the trochanters, and was therefore less than four lines distant from the top of the trochanter-major, and less than six lines from the top of the trochanter-minor, and could not have been included by the normal capsule.

"No. III. *Mr. Stanley's Case.*—A young man, aged eighteen, fell from the top of a loaded cart upon his right hip, the injury of which was attended with the following symptoms: He was wholly unable to move the limb; the thigh was bent to a right angle with the pelvis, and could not be extended; abduction was difficult; the limb was everted, but there was no shortening, nor could crepitus be felt in any motion of the limb. This patient died, of what was supposed to be small-pox, about three months after the occurrence of the accident. In the examination of the joint, after death, the capsule was found thickened, the round ligament uninjured; a line of fracture extended obliquely through the neck of the femur, and entirely within the capsule; the neck of the bone was shortened, and its head approximated to the trochanter-major. The fractured surfaces were in the closest apposition, and firmly united nearly in their whole extent by bone. There was an irregular deposition of bone upon the neck of the femur, beneath its synovial and periosteal covering, along the line of the fracture."*

The history of this case, as given by Mr. Smith on page 58 of his work on Fractures, affords but little evidence that the bone was ever fractured; and had Mr. Smith quoted the whole of Mr. Stanley's report of the case, it would have convinced most surgeons that there was at least a reasonable doubt that fracture had ever occurred. We can see no good reason why a portion of the history, as important as the following, should be suppressed:—

"The age of the patient was unfavorable to the occurrence of a fracture of the neck of the thigh-bone. The general opinion, therefore, of the several surgeons to whose judgment the case was submitted, favoring the belief of a dislocation into the foramen ovale, forcible extension of the limb was made by means of the pulleys, and the thigh then moved in several directions, by which the head of the bone might be replaced in its socket."†

The symptoms which attended the injury seem to be in harmony with the diagnosis of dislocation, for the patient was "wholly unable to move the limb; the thigh was bent to a right angle with the pelvis, and could not be extended; abduction was difficult; the limb was everted, but there was no shortening, nor could crepitus be felt in any motion of the limb." If the neck of

the bone had been broken by the fall, it seems impossible that forcible extension of the limb by the pulleys, together with the moving of the limb in different directions, should have failed to enable Mr. Stanley to detect crepitus. If there had been impacted fracture of the neck, the extending force applied would have loosened the impaction of the fragments, and then, according to Mr. Smith's rule, we could not have hoped "for the occurrence of bony consolidation."* Maligne affirms, of this specimen, that the neck has lost nothing of its form or length by absorption; while Mr. Smith states that the neck was shortened and its head approximated to the trochanter-major. It is impossible to reconcile these conflicting statements. If the neck was not shortened, it is probable that the insertion of the capsule was not removed. If, on the contrary, "the neck was shortened, and its head approximated to the trochanter-major," it is quite probable that the insertion of the capsule had receded toward the shaft of the bone, and that the line of union was at least partly without the normal capsule. Mr. Stanley's history of the case states that "the neck was shortened, and its head in consequence approximated to the trochanter-major."

"No. IV. *Mr. Swan's Case.*—Mrs. Powell, above eighty years of age, fell down, Nov. 14th, 1824. Sir Astley Cooper, who saw her soon after, believed that there was a fracture of the neck of the femur, although there was no appreciable shortening of the limb, and only a slight inclination of the toes outward; crepitus could not be perceived. The patient died about five weeks after the occurrence of the accident. Upon examination of the joint, after death, the fracture was found to have been entirely within the capsular ligament, and the greater part of it was firmly united. A section was made through the fractured part, and a faint white line was perceived in one portion of the union, but the rest appeared to be entirely bone. The cervical ligament had not been injured."†

Sir Astley's opinion that the bone was fractured, does not seem to be well founded on the recorded symptoms of the case. The only symptom which can be said to lead to such a conclusion is "a slight inclination of the toes outward;" and this is what we have reason to expect in every severe contusion of the muscles of the hip, as an effort on the part of the patient to relieve pain by relaxing these muscles, all of which rotate the limb outward. Sir Astley states:—

* Smith on Fractures, page 58.

† Medico-Chirurgical Transactions, vol. xviii. p. 257.

* See page 64, Smith on Fractures.

† Smith on Fractures, page 59.

"I saw her soon after, and found her complaining very much of pain in the left hip; the limb could be moved in every direction, but this motion produced excessive pain. She was laid on her back, with the limb extended, and nothing was ever done beyond the application of fomentations for the first few days. I believed there was a fracture of the neck of the thigh-bone, although the limb remained quite as long as the other; and I could neither perceive a crepitus, nor any altered appearance in its position, except a slight inclination of the toes outward. She had no appetite for common food, and for three weeks appeared so weak that she was under the necessity of taking wine and brandy."*

The patient "was above eighty years of age" when she received the injury, and the vital powers were so nearly exhausted that her death occurred five weeks afterward. After the injury, "she had no appetite for common food, and for three weeks appeared so weak that she was under the necessity of taking wine and brandy." It is difficult to conceive it possible that, under such unfavorable circumstances, bony union of an intra-capsular fracture should occur in so short a time without any treatment, when more than that time is required for bony union of a fracture of the shaft of the femur in a patient enjoying full health in the prime of life. If we admit that the neck was fractured, and that it was subsequently united, then we wish to know if the specimen has been submitted to the test of maceration or boiling to prove the statement of Mr. Swan, that "the greater part of the fracture was firmly united by bone"? If not, there exists a possibility that the bond of union may be composed of fibrous tissue instead of bone.

"No. V. *Mr. Adams's Case*.—Owen Curran, aged seventy, was, for the last five years, an inmate of the pauper department of the House of Industry. * * * On the first of August, 1837, while walking across his ward, he fell on his right side; he was unable to rise, and felt pain in his right hip. * * * He was visited by Mr. William Johnstone, who found the limb everted, and only half an inch shorter than the other. * * * Mr. Johnstone considered the case a fracture of the cervix femoris, which required no other surgical treatment than that of placing and preserving the limb in a semiflexed position over pillows."

"This man survived the accident one year and nearly ten months, and was able to walk." At the expiration of this time, he had an attack of bronchitis, which terminated fatally in four days. An examination of the body showed that the right leg and thigh were very much everted; the

trochanter-major was elevated and projected much outward; the degree of shortening just amounted to one inch; the muscles presented a healthy appearance; the capsular ligament was of a yellowish color, and somewhat thickened. * * * The round ligament was sound. The head and neck of the bone had lost their normal obliquity, and were directed nearly horizontally inward; the cervix presented, both anteriorly and posteriorly, evidence of a transverse intra-capsular fracture having occurred; the globular-shaped head of the femur was closely approximated behind and below to the posterior intra-trochanteric line, and to the lesser trochanter; so that the neck seemed altogether lost, except anteriorly, where a very well-marked ridge of bone showed the seat of the displacement and of the union of the fragments. * * * The fracture of the neck, posteriorly, was found to have been closer to the corona of the head than anteriorly. * * * Scarcely any portion of the neck can be said to have been left.

"The bone was, in its recent state, on the 25th of May, 1839, laid before a meeting of the Pathological Society. It seemed to be the universal opinion of the members present, that it was a decided specimen of the intra-capsular fracture of the cervix femoris which had been solidly united by bony callus."* Accurate engravings of this specimen may be seen on page 61 of Mr. Smith's work.

It is difficult to see how it is possible that "the cervix presented, both anteriorly and posteriorly, evidence of a transverse intra-capsular fracture," when "scarcely any portion of the neck can be said to have been left." In the normal condition of these parts, full half of the posterior surface of the neck is usually found to be external to the capsule; and since "the neck seems altogether lost, except anteriorly," it is plainly a case in which union occurred at least partly without the normal capsule, even though the line of union was included by the capsule of the morbid specimen, as seen by the members of the Pathological Society. We have already shown that it is impossible to locate the fracture after the neck has been removed by absorption. The fact that the line of union was included by the morbid capsule, furnishes no evidence that the fracture was intra-capsular.

To be continued.

* Cooper on Dislocations and Fractures of the Joints. London edition, page 157.

* Smith on Fractures, page 60. The history of this case being very lengthy, has not been quoted in full, yet it is believed that no important fact has been omitted.

Illustrations of Hospital Practice.

PHILADELPHIA HOSPITAL.

MEDICAL CLINIC.

Service of Dr. Da Costa.

January 15, 1862.

ANÆMIA—BLOOD DISEASE—ENLARGEMENT OF THE SPLEEN.

The patient, a woman aged thirty-six, was before the class at the last clinic. She had lost her health from a long-continued residence in a miasmatic district. Both liver and spleen were found markedly enlarged. There was great sensitiveness of the skin, dyspnoea, palpitation of the heart, œdema of the feet. The significance of these symptoms was at the time fully explained. In resuming the case, Dr. Da Costa called special attention to the peculiar waxy hue of the countenance, and other signs indicative of the altered condition of the blood. The color of the face may at first sight be mistaken for that of jaundice. Extreme cases of anæmia indeed simulate in appearance certain cases of jaundice. But the look of the eye is always very different. In jaundice the membranes are invariably yellow; in anæmia, unchanged or of pearly whiteness.

You may also, to some extent, distinguish an impoverished state of the blood by the stethoscope. If you apply that instrument over the jugular vein you will hear a humming sound, *bruit de diable*. This continuous murmur is very frequently present in anæmia. The character of the blood, too, when drawn, is different from that of health. Thus when we examined the blood of this patient, taken from a small puncture, we found blood and water literally flowing out together, or, in other words, the serum and fibrin separating as they flowed from the wound, and a loose clot rapidly forming. Whenever we see this rapid separation of the constituents of the blood taking place, and a loose, small clot forming, we may regard it as diagnostic of anæmia. Upon examination of the blood with the microscope, we found the red corpuscles few in number, jagged, and the white corpuscles increased in quantity. In healthy blood the former are as 300 to 1 of the latter; in this case, the proportion, judging roughly, is about 60 to 1. So large an increase of white corpuscles is not usually found in pure anæmia, but is more characteristic of that disease termed, of late years, leucocythemia. This strange affection is invariably connected with degeneration of the blood-making glands, the spleen, mesenteric glands, etc. The diseased spleen is perhaps the grave of the red globules of the blood. It consumes them as they pass through it, giving out the white in their stead. A disease of that organ, at all events, permits the changes which are necessary to produce the latter constituent of the blood in excess.

Prognosis.—When the blood is profoundly al-

tered the disease assumes a serious character, and is more likely to prove fatal when the excess of white globules is great. There is no medicine yet discovered which has certain power to change this condition of the vital fluid. The debility goes on and death is the result, from diarrhoea or hemorrhage. This case, however, is not hopeless. The excess of white globules is slight, and the disease may yield to appropriate treatment. What should that treatment be? She should have the most nutritious food—beef-tea and those articles which contain a large amount of albumen. She should take also the cod-liver oil in such quantities as her stomach will tolerate. The object should be to increase the red corpuscles of the blood. Regarding it as a case which has had a malarial origin, I would give her twice a day a pill composed of two grains of quinine and two grains of metallic iron; the latter, like the cod-liver oil, is regarded as an agent increasing the red globules. But we have here also extreme sensitiveness. How can we relieve it? Perhaps by anointing the surface with an oleaginous substance, as sweet oil. Why? On the ground of analogy. In scarlatina the application of oil to the surface relieves the itching and extreme sensitiveness, and imparts a soothing sensation. We will at least try the remedy in this case.

APOPLEXY—DEATH—CLOT IN THE VENTRICLE.

This was the case of a female twenty years of age, admitted, far advanced in pregnancy, into the obstetric wards six weeks ago. Was taken in labor on Monday of last week; pains vague and irregular, continued on Tuesday; on Wednesday she fainted, the head being then in the pelvis. Symptoms of congestion of the brain making their appearance, she was bled. Delivery was effected by the forceps, she being under the influence of ether. She appeared well after delivery, but soon convulsions followed, continuing six hours, but readily controlled by chloroform. Her breathing, however, became labored, and she sank into a semi-conscious state. No paralysis; laborious respiration continued till Thursday at 4 p.m., when she died.

The lecturer did not propose to direct attention to any obstetrical phenomena in this case, but rather to two striking points which it exhibits in a medical point of view. You have before you the brain of this patient, and you observe a large clot occupying the right lateral ventricle, extending to the third through the foramen of Monro, through the iter ad quantum ventriculorum to the fourth, and finding its way, therefore, from above downward to the base of the brain. Notwithstanding this extensive clot, there was an entire absence of paralysis—and why? Because the clot did not press materially upon the substance of the brain. I have myself seen a case in which a clot was found distending the lateral ventricle, and in all the ventricles of the brain, in which there was no paralysis. So that we may have slight compression of the brain substance from a large effusion, without paralysis following; this

sign depending indeed more upon the situation of the clot and upon the amount of pressure resulting from it than upon its size. Why laborious breathing? Simply because the clot pressed upon the origin of the pneumogastric nerve.

JAUNDICE—ENLARGEMENT OF THE LIVER.

This patient was admitted to the hospital last evening in a state of nervous depression from intoxication, though she denies being habitually an intemperate woman. She is twenty-five years old, married; states to have been sick for nearly two weeks. She does not remember a chill at the commencement of sickness, but speaks of a gathering in her stomach, a lump in the region of her liver, which she has noticed since her illness; no thirst; slight, if any, fever; costive; urine scanty; appetite good; thinks she caught cold in ironing in a damp house and sleeping in a damp apartment; pulse feeble, 86 in a minute; respiration 25; has no itching of skin; some cough; lungs, on percussion, are clear, both anteriorly and posteriorly; auscultation reveals extensive dry râles and a few fine, moist sounds; heart impulse feeble, no blowing sounds; slight tenderness at lower portion of abdomen; considerable in epigastrium and right hypochondrium; on percussion we find the whole liver enlarged, especially the left lobe; some nausea, no vomiting, but there is not any inflammation of the stomach, as we judge from the clean tongue. The epigastric tenderness really proceeds from the liver.

Our diagnosis, then, is jaundice, with bronchitis and slight irritation of the stomach, the latter probably the sequence of a debauch. The jaundice is evidently connected with marked hepatic enlargement. The stools will no doubt be found clay-colored and devoid of bile. When we have bile in the circulation, it is at the expense of bile in the feces. Now we note two curious facts in this case, to which your attention is especially directed; the feeble pulse, which may result from the general debility, but also from the bile acting as a poison through the blood; and the absence of the dry itching of the skin, which is so usually present in jaundice.

Treatment.—We will apply dry cups to the lungs, and turpentine stupes; we will take a small quantity of blood over the region of the liver by means of the scarificator and cups. She may take two drachms of bitartrate of potash, dissolved in water, every four hours, alternating it with a teaspoonful of the following mixture, also every four hours:—

R.—Vinum ipecac. gtt. x;
Potassæ acetatis, gr. x;
Spiritus ætheris nitrosi, gtt. xx. M.

The bitartrate of potash, like all the salines, has a peculiarly excellent effect upon the portal circulation, and the mixture will remedy the bronchial affection.

The use of remedies to relieve the portal congestion is here evidently indicated, and it is with this view that the treatment mentioned will be

instituted. The short duration of the disease, or perhaps it may be its recent aggravation, show that within a short time there has been very considerable congestion of the liver, which we will endeavor to counteract as far as possible. Other agents may have to be employed as we obtain a fuller insight into the nature of the marked enlargement.

JEFFERSON MEDICAL COLLEGE.

SURGICAL CLINIC.

Service of Prof. Gross.

December 28, 1861.

FOREIGN BODY IN KNEE-JOINT.

This was a young man twenty years of age, a patient of Dr. Shive, of Bucks County. The case is one of three years' standing, but the patient has lately noticed the presence of a foreign body in the articulation. The joint is larger than natural; the ligament of the patella is relaxed; the synovial fluid is increased in quantity, making pouches on each side of the joint; there is no discoloration; has some pain on fatigue. The patella stands prominently out, and a grating noise is imparted by its movement under the finger, showing a roughness of the cartilage from the friction of the foreign body. This body can be felt distinctly, and is so exceedingly smooth and slippery in its character, as to jump about from side to side with the utmost agility. It is probably a loose cartilage, about the size of a small hickory-nut, and is located behind the patella, between the condyles of the femur. When it comes down, as the term is, the patient drops as if shot. These bodies are fibro-cartilaginous in their nature, the result of inflammation and the deposit of lymph. At first they are attached to the synovial membrane by a pedicle, afterward becoming detached by the friction of the joint. They are sometimes quite large in number—thirty-eight or forty have been taken from a single knee-joint. They vary in size also, and are always attended with more or less pain. The method of cure is removal. In former times this operation consisted in making a bold incision down upon them, and direct removal. In later times this operation has given place to that of removal, by subcutaneous incision through the synovial membrane, the object being to exclude the air from the joint. Through the opening thus made the body is forced by manipulation, and when fairly outside of the membrane, a bandage with compress is applied above, and also one below, from the foot up, so as to avoid unequal compression. In this position the foreign body is allowed to remain some days, when it may be cut out from underneath the skin without danger to the joint. To render this operation a successful one, and avoid inflammation, the patient should be previously purged, and restricted in diet. The limb should be kept at rest and the patient quiet. If inflammatory action arise, the sugar of lead solution may be applied warm, and anodynes may be used.

CHRONIC INFLAMMATION OF THE BLADDER.

This case was that of a man from the interior of the State, fifty years of age, always healthy. He ascribes the origin of his difficulty to hard labor in the war with Mexico. Micturition is painful and frequent, requiring him to pass water every half hour, and attended with burning sensation in extremity of penis. A sense of relief follows. Urine red in color, probably loaded with lithates. The flow of urine is not suddenly interrupted, as it might be if calculus were present, nor is there any inordinate straining required in passing it. Suspecting calculus, we introduce the sound, but detect none. Still it may exist, and the patient should be sounded again and again, till the diagnosis is clear. Meanwhile let him take the following mixture:—

R.—Uva ursi, ʒi;
Humil. lup. ʒss;
Aque bullientis, Ojss.

Boil to one quart, and take one-third of a tumbler of the mixture three or four times a day, adding half a teaspoonful bicarbonate of soda. The former of these remedies has a specific action upon the urinary passages; the latter upon the urine itself.

sixteen grains; gamboge, five grains; tartrate of antimony, one grain; croton oil, one drop. Mix in 64 pills. Of these pills one taken during or directly after a meal, once, twice, or three times a day, will rarely operate medicinally, and will usually produce a natural fecal discharge.

"This method may be often pursued for years, without any necessity for an increase in the quantity, though this is not always the case; nor have I ever found that any evil has arisen from such continuance. Undoubtedly the large and habitual introduction of any medicinal substances into the stomach is to be avoided if possible, and no person should yield himself to such a habit when the end can be attained in any other way. Still, when we consider the constant errors of diet as to quantity and quality, of which most persons are daily guilty, and also their constant offenses against the laws of health in other respects, it is not too much to say that very few of us pass a day of our lives without some indulgence which is far more injurious than taking into the stomach a small quantity of medicine. I believe that the daily eating of newly-baked bread and butter, hot buttered toast, pastry and confectionery, short-cakes, rich soups and gravies, and puddings, might with very many individuals be advantageously exchanged for a few grains of aloes or rhubarb."

EDITORIAL DEPARTMENT.

PERISCOPE.

Weekly Summary of American Medical Journalism.

By O. C. GIBBS, M.D.

CONSTIPATION.

In Dr. Ware's eighth lecture upon *General Therapeutics*, as published in the *Boston Med. and Surg. Journal* for September 26th, a few remarks are made that we consider worthy of quotation. Speaking of constipation and its treatment by medicines, he observes that the aim should not be to produce a cathartic action, but to produce as nearly as possible a natural discharge. To this end he would advise medicines in small doses, at meal times, or one dose at bedtime, so as to secure one motion in the morning. He then adds:—

"The article selected is of less consequence than the mode of giving it; but no method I have ever employed for the use of persons so persistently costive as to be obliged to depend upon medicine for its relief, has been so satisfactory as the combination of a large number of cathartic substances in small quantities in a single prescription, as in the following: R.—Aloes, one scruple; jalap and rhubarb, scammony, each

In cases of habitual costiveness, we have found it almost impossible to prevent patients from taking cathartics even against our positive orders. They are too apt to regard constipation as the primary difficulty, the cause of all their sufferings, and cathartics as the only remedies. Unwilling to take medicines daily and for some time, systematically and with a definite object in view, they let the bowels remain confined for several days, perhaps a week, and then give themselves a "thorough cleaning out," by taking an active cathartic, which rids them of fecal matters that should have been passed several days before. The bowels thus suffer from the unhealthy action of feces unnaturally retained and decomposing; and, again, by the unnecessarily harsh cathartic. These influences, if repeated long, will undermine the health of the most robust. Upon this point Dr. Ware has the following:—

"It cannot be too strongly impressed upon those who suffer from this infirmity, that the worst method of dealing with it is to permit several days to elapse without a movement, and then to procure one by taking a full dose, which shall operate as a cathartic, of such articles as jalap, senna, bilious pills, or even aloes and rhubarb. In this case the patient suffers in some degree the evil of the cathartic without the real benefit of an open state of the bowels, while the frequent use of such doses tends strongly to undermine the powers of the digestive organs."

NUX VOMICA AN ANTIDOTE TO ACONITE POISONING.

In the *Boston Med. and Surg. Journal* for September 26th, Dr. D. D. Hanson, of Hartford, reports a very interesting case of poisoning with aconite, in which relief was prompt and decided, following the administration of tincture of nux vomica. The patient was a boy five years of age, and had evidently taken a destructive dose of tincture of aconite, though the exact amount could not be ascertained. The doctor found his patient comatose.

"The pulse was feeble and irregular, respiration requiring artificial aid to support it, and the muscles and ligaments so much relaxed that he could neither stand up or sit unless supported. His respiration finally degenerated to a gasp, occurring five or six times the minute; then he would convulsively straighten out in the lap of his attendant, throw his head and shoulders back, and his hands over his head, as if, mechanically, to get a longer and fuller inspiration, then relax into the same state as before."

Truly these were alarming symptoms. The most powerful emetics produced no effect, so far as emptying the stomach was concerned.

It was evident the patient must soon sink unless the nerve centers, and through those, the muscular system, could be aroused to something like a normal action. Having this object in view, the doctor gave three drops of the tincture of nux vomica, and this was repeated after twenty minutes. At this point the emetics already administered operated. Three drops of the tincture was administered every three hours for twelve hours longer, and the patient was discharged cured.

Dr. Hanson says:—

"As a corollary to this, I think it may be said that nux vomica is a complete antidote to aconite, and, conversely, that aconite is equally an antidote to nux vomica. Nor is it unworthy of thought, that the antidotal powers of nux vomica may extend with equal force to the whole family of acro-narcotic and narcotic poisons."

VENTRAL HERNIA MISTAKEN FOR PREGNANCY.

Before the Boston Society for Medical Improvement, as per report in the *Boston Medical and Surgical Journal* for September 26th, Dr. Abbot reports a very interesting case of a lady, nearly forty years of age, who supposed herself pregnant and near her period of confinement. She was embarrassed by the fact that her catamenia returned regularly every month. On examination, the doctor found the enlargement to

be from ventral hernia; "the motion which had been attributed to a foetus was merely that of peristaltic motion." The case has not yet terminated, but we infer that the doctor supposes her not to be pregnant.

We have made mention of this case for the purpose of referring to one now under our observation.

About nine months ago, we were notified by a female friend—a married lady, aged forty years—that she was pregnant, and she wished to engage our watchful care and professional advice during her period of pregnancy, and assistance at her accouchement. She informed us that she had been many times pregnant, but had invariably miscarried at the end of the first, second, or third month.

We advised for the case, and heard no more of it, except that flowing occurred frequently, threatening an abortion. We inquired after the case often; but as it was some distance away, and symptoms not urgent, we did not visit the patient. We learned, however, that her periods of flowing and threatened abortion occurred *monthly and with very great regularity*. At the end of her ninth month, as she supposed, she began to flow. Pains in the bowels were an accompanying symptom, and the good lady expected she was about to be confined. Her lady friends were sent for, and then a messenger was dispatched for us. Being otherwise engaged, a medical neighbor saw the case. He spent the night with the patient and her lady friends, watching for the birth of the long-expected and desired child, with a great deal of solicitude. As day dawned, the doctor informed her she would not be confined that night, but that her desires and anticipations would probably be realized within a day or two.

Four weeks later we were called to the case. She had, she said, flowed about four quarts in the last two days; pains were quite severe, according to her statement, and she expected to be confined daily.

On examination, per vaginam, we informed the good woman that she would not be confined at present. She expressed great disappointment, and wept at her bad fortune. We cautiously, and with such tact as we could command, informed her that we doubted her pregnancy.

We will briefly allude to a few of the symptoms present:—

The lady, always regular, passed her monthly

for eight weeks. At the end of eight weeks she flowed more than usual, and she feared abortion. It was then she first consulted us. From this time her flowings have occurred regularly every four weeks. These flowings have been double or treble the normal amount. She has had morning sickness, enlargement of the abdomen and breasts, and, as she supposed, had felt motion for the last five months.

On examination, we could find no uterine tumor; the bowels seemed soft, and not distended as is usual in the last months of pregnancy. Her breasts, she knew, had doubled their normal size, and she was very confident of having experienced motion. Though naturally fleshy, and of excellent health, as are most of our English people, of whom she was one, at this time her health was below par. Her appetite was very poor, her countenance pale and sallow; her pulse quick, weak, and irritable; and the heart subject to palpitations on any considerable exertion. The bowels were not much distended, and what distention there was, we believe was owing to gaseous formations consequent upon imperfect digestion.

We advised the patient to give herself no uneasiness about herself, make no remarks about her case, to send out for no lady friends until she had first sent for us, and their invitation should be by our recommendation. We made a prescription with reference to the improvement of the lady's general health. At the time we saw her, she was sure she was *ten months advanced*. Six weeks have passed, and we have not heard from our patient, save to learn that she has not been confined, and that her health is better than for many previous months.

The supposed motions in this case were probably deceptions, caused by peristaltic action, or undue cardiac excitement. We may hereafter allude to the ultimatum in this case.

BLUE COHOSH, (CAULOPHYLLUM THALICTROIDES.)

A week or two ago we had an article upon the *black cohosh*, in which the opinions of some of the most recent writers were expressed. In the *Journal of Materia Medica* for October, Dr. C. A. Lee has an article upon the *blue cohosh*. Having a strong desire to see our indigenous remedies more thoroughly investigated and relied upon, we shall make a quotation or two. Dr. Lee says:—

"Our experience satisfies us that it is a very efficient alternative; possessing diaphoretic, diuretic, and anthelmintic properties; that it exerts a special influence over the uterine organs, and controlling uterine contraction in a manner similar to ergot. It is also a remedy of known efficacy in dysmenorrhœa and amenorrhœa, as well as uterine leucorrhœa. Among the Chippeway Indians, on Lake Superior, we found a tea of the root employed by pregnant females for some time before confinement, to facilitate parturition.

"In rheumatism, it has been used with much success, especially in combination with small doses of iodide of potash. Its operation in such cases is very similar to that of the black cohosh, though some consider it more reliable. In chorea, it produces striking effects, being decidedly antispasmodic and tonic. In small doses, it restores tone to the digestive organs, while it improves and regulates the various secretions. In atonic dyspepsia, it may be used with great advantage, though not to the exclusion of other remedies."

In regard to its influence over uterine affections, he makes the following remark:—

"I would, however, advise its trial as an alternative in chronic uterine affections and derangement of the menstrual functions, as well as atony of the uterus causing tedious parturition. There is great reason to believe that its powers in such cases are underrated. In some cases it may be associated with iron, in others with iodine, with advantage; but in all cases, its use is to be continued for a considerable time."

In regard to its combinations and methods of use, we subjoin the following:—

"The plant is used in the same preparations as the black cohosh. The dose of the fluid extract, as an alternative tonic, is fifteen to thirty drops; of the solid extract, from one to three grains; of caulophyllin, one or two grains; of the infusion, made with one ounce of the bruised root to a pint of boiling water, one to three drachms; of the saturated tincture, thirty drops; of the syrup, one to two drachms. The following mixture has been given with good results in amenorrhœa, dysmenorrhœa, and other chronic affections:—

B.—Fluid extract of blue cohosh,	℥ij;
" " ergot,	℥j;
" " water pepper,	℥j;
" " savin,	℥j.

M. Dose, twenty to forty drops two or three times a day.

"The following combination has been highly recommended in unhealthy conditions of the uterus and appendages, and as an antispasmodic in epilepsy, hysteria, and chorea, and as a stimulating general alternative:—

B.—Caulophyllin,	12 grs.;
Cimicifugin,	12 grs.;
Carbonate of ammonia,	12 grs.

M. Dose, three to six grains.

"A mixture of twelve grains of caulophyllin, ten grains of podophyllin, and ten of mur. of ammonia, has been used with benefit, in doses of three grains, in nephritic diseases, accompanied with pains of a spasmodic character. Another combination of some reputation, is ten grains of caulophyllin and eight grains of dioscorein, of which three to six grains are given in bilious colic and flatulence."

HEAT AND COLD AS AFFECTING THE TEETH.

Some months ago we referred to the opinions of Dr. Robertson, relative to the influence that mercurials had upon the teeth. We quoted from the *Dental Cosmos*. As our article was prepared for the *A. M. Monthly*, we will recapitulate here a remark or two. Our readers are doubtless sadly aware of the fact that many people attribute the decay of their teeth to the effects of medicine:—

"A common expression with such is, 'since my health has been bad, I have taken so much medicine that it has ruined my teeth.' Such forget that good health is all-important to the integrity of the teeth—they do not imagine that it is *disease* and not *medicine* that causes their decay. In the *Dental Cosmos* for June, Dr. Robertson has an article upon the *effects of disease on the teeth*, in which the above fact is distinctly stated. We rejoice to see a dental surgeon vindicating the honor of medicine. Dr. Robertson, while he admits that the '*surroundings*' may be injured, denies even that calomel has any direct influence in causing the decay of teeth. We quote one experiment: 'Dr. Westcott, in his experiments, found that teeth placed in a mixture of calomel and water of about the consistency of cream, and allowed to remain there for four months, came out as bright and as clean as when they were put in. And some years ago I placed one tooth, thoroughly cleansed from all foreign matter, into a phial with fifty grains of calomel mixed with about two or three fluid drachms of saliva, and at the end of six weeks no change was perceptible even by the aid of a powerful magnifying glass.' * * *

* * * 'Having now shown that *medicines*, judiciously exhibited and properly administered, do not, and generally cannot injure the teeth, and that many, if not most, *diseases* do, and of necessity must injure them more or less, I cannot refrain from adding that the *injudicious* exhibition and improper administration of medicines, and more especially the drenching themselves with quack nostrums, to which our people are so strongly prone, as uniformly do, and must, produce ill effects on these organs.' * * *

'Hence, a safe general rule in relation to quack nostrums is, that any time is an *improper time*, and any quantity is an *improper quantity*; and this is true of all stages of existence, from earliest youth to decrepit age. But medicines, when so

administered as to secure the object for which they were given—the restoration of the secretions from an abnormal to their normal condition, the restoration of the body from disease to health—instead of injuring the teeth, protect them from injury.'

Returning to our subject, as regards temperature over teeth and their fillings, we quote the following from an editorial article in the *Dental Cosmos* for September, by Dr. J. H. McQuillen. We have space but for one extract:—

"On a former occasion we referred to experiments performed by Dr. Flagg and self, to test the correctness of the oft-repeated assertion that the practice of drinking ice-cold water and hot coffee or tea at the same meal is liable to fracture the enamel. As stated on that occasion, several teeth were repeatedly immersed in water at the boiling point, and suddenly removed from that and thrown into ice-cold water, without making an apparent impression upon any of them. Desiring to obtain a section of enamel for microscopical purposes we adopted that course to secure it, but found at last that it could only be accomplished by subjecting the tooth to a dry heat, when the enamel readily separated from the dentine.

"If our impression is correct that tooth substance is very slightly affected by the variations of temperature to which it is subjected in the living body, it is only necessary to consider the probable changes produced in gold fillings by the same influences. According to the table presented, when a gold bar is passed from 32° to 212° it is found to expand 1/682 of an inch: in other words, a gold rod 682 inches long would be increased exactly one inch in length—the same ratio of expansion, of course, taking place in every direction. Now, in the mouth, neither gold or anything else is subject to a higher temperature than 140°, and the variation does not start from 32° and run upward, but it commences at 98° (temperature of the mouth) and from that point varies between 32° and 140°, according to the temperature of the solids or fluids introduced. Taking into consideration, then, the infinitesimal expansion which occurs in passing gold from the freezing to the boiling point of water, it appears exceedingly doubtful whether the variation to which that metal is subjected in the mouth can be justly regarded as a force sufficiently expulsive to drive fillings from their cavities."

VAGINISMUS.

At a late meeting of the Obstetrical Society of London, Dr. J. Marion Sims, of New York, read a paper on what he termed vaginismus. The following report of his remarks, and the discussion which followed, is from the *London Medical Times and Gazette*:—

"By the term 'vaginismus' the author proposes to designate an involuntary spasmodic closure of the mouth of the vagina, attended with such excessive super-sensitiveness as to form a complete barrier to coition. This affection may be complicated with inflammation, but it does not depend upon it; and in the most perfect examples which Dr. Marion Sims had witnessed, there was no such complication. Vaginismus can only be confounded with impermeable hymen, or with atresia. In each of these two cases marriage may have existed without consummation, but the true cause is patent on investigation. In an example of vaginismus the gentlest touch with the finger produces excruciating agony. The sensitiveness is at all parts of the vaginal outlet; but often the most tender part of all is at the fourchette just where the hymen projects upward, or, again, at the orifice of the vulvo-vaginal gland. The treatment consists in the removal of the hymen, the incision of the vaginal orifice, and subsequent dilatation. The way in which these operations are to be performed was fully described; and the paper concluded with some general observations to show why the term 'vaginismus' had been chosen for this disease.

"Dr. Oldham thought that there were few obstetricians of much experience who had not met with cases of a similar nature to those noticed by the author. He reminded the Society that some years ago he had described some cases where these painful symptoms were present, but which he had connected with inflammatory conditions of the follicles of the vulva. He had since that time kept a record of similar cases, and he did not call to his recollection any instance where there was not that condition present. He had found almost every case amenable to a sedative plan of treatment, and condemned the use of caustics.

"Dr. J. Braxton Hicks had seen one such case in which the whole membrane of the vulva was rough with small papillæ; and he considered that the exquisite tenderness in this case was owing to a diseased condition of the sensitive papillæ.

"Dr. Tyler Smith said that Dr. Marion Sims had given a name to a condition which he thought was far from uncommon in this country. Excessive sensibility and spasm of the vagina were sometimes quite distinct from vaginitis, and might be present when no disease of the mucous membrane existed. He had always considered it as hysterical spasm of the sphincter vaginae, and treated it by division and dilatation. He had known such a condition interfere with intercourse for thirty years.

"Dr. Tanner thought that the cases described by Dr. Sims, and those alluded to by Dr. Oldham, were quite distinct in their nature. As regards follicular inflammation of the vulva, Dr. Tanner was happy to bear witness to the accurate description of this troublesome disease which had been given by Dr. Oldham. Such cases were

only to be cured by attention to the general health and sedative local applications. All irritating lotions or ointments did great mischief.

"Mr. Spencer Wells could support Dr. Tyler Smith's statement, that these cases were sometimes seen without any follicular disease about the vulva. He had seen such a case where connection had been impossible for three years after marriage. There was no hymen, or merely a rudimentary fold of mucous membrane offering no impediment. This case was completely cured by introducing one of Bourjeaud's cylindrical air-pessaries under chloroform, and keeping up dilatation for a few days."

ARTIFICIAL ANUS IN THE LUMBAR REGION.

A very interesting case, in which an operation for such an anus was performed, has been published in the *Bulletin de Thérapeutique* of October 30th. The child was born with an imperforate anus in 1852; and, in spite of a very careful and prolonged dissection, the late M. Amussat could not find, though his finger reached quite within the pelvis, the cul-de-sac of the imperforate bowel. It was now a question whether the search should be carried further and at random into the pelvis, or whether a lumbar anus should be made. M. Amussat, on consultation with the medical men present, among whom was his son, decided on the latter measure. By a careful dissection, the colon was reached, and gases escaped. Notwithstanding the severity of the two operations, the child did well, and the motions passed through the abnormal orifice, the patency of which had been secured in the usual way. Six days after the operation, MM. Cloquet, Velpeau, and Jobert were called in consultation to decide upon further steps. It was agreed that no renewed attempts should be made on the natural imperforate anus, and no fresh operation at that period undertaken. At six months old the child was well and cheerful, evacuations regularly taking place at the lumbar opening, the new aperture being usually stopped by a wax plug. M. Amussat, Jr., had an opportunity in 1859, seven years after the operation performed by his late father, of seeing the little boy. The latter was quite well and lively, notwithstanding the artificial anus, the evacuative functions having been very regular in their performance. The child wears in the aperture a wax bougie, fastened by an elastic belt.—*Lancet*.

CONDITION OF THE STUMP AFTER PIROGOFF'S OPERATION.

On the 26th ult. we had an opportunity of examining the stump of a man on whom Mr. Bryant had performed Pirogoff's amputation, fifteen months previously; and, as it is not a common form of operation, it is as well, perhaps, to chronicle the result.

Mr. Bryant, in introducing the patient to his class, dwelt upon the importance of showing the

results of operations, and added that he had much pleasure in bringing before their notice the man upon whom he had performed Pirogoff's amputation, as the result had been so entirely satisfactory. The patient was thirty years of age, and the foot had been removed for rapid disorganization of the tarsal joint. The stump, as might be seen, was quite perfect, any amount of pressure being tolerated without the slightest pain or inconvenience being experienced. The man could walk and take exercise as well as ever, and could support the weight of the body upon the amputated limb as well as on the sound one; indeed, as the patient expressed it, the limb was just as good as its fellow for all purposes of support.

Mr. Bryant explained that "Pirogoff's" amputation at the ankle differed from "Syme's," in which the divided extremities of the tibia and fibula were only protected by the integument of the heel, by the fact that in the former the extremity of the os calcis was also retained, which, in the case before him, had become firmly united to the resected extremities of the tibia and fibula. By this operation not only was the natural pad of integument preserved, but the bony heel itself was maintained; and the inconvenience and distress too often experienced by persons upon the divided extremities of the bones were done away with. He did not think that any one, after examination of this stump, could doubt which was the better of the two operations, and added that in all cases in which amputation at the ankle was required, Pirogoff's operation should be preferred if it could be performed.—*Guy's Hospital Reports*.

PURPURA HÆMORRHAGICA, SUCCESSFULLY TREATED
WITH TINCTURE OF THE MURIATE OF IRON.

I was called in to visit M. B., aged 14 years, on the 3d instant. Her complexion is fair, with ruddy cheeks, and her general conformation rather delicate. Family history bad. Mother and father both died of phthisis, as also some uncles and aunts. The patient has never menstruated. Her health has been pretty good, but for the last fortnight she has complained of feeling weak and languid, being indisposed for exertion of any kind. A cough came on a fortnight ago, which has disturbed her a good deal at night. There has been very little if any expectoration with the cough; believes she caught cold, since which she has been getting gradually worse. She states she has no pain in her chest, but there is a sense of dull uneasiness in the lower sternal region, not amounting to actual pain. Pulse 132; tongue coated with a thick layer of yellowish-white epithelium. Has never vomited, but feels nausea.

On examining the lungs, nothing unusual was discovered, with the exception of a little mucous rale in the posterior and lower aspect of each. Percussion sound not perceptibly altered. She has been living in a large town, at some distance from her native place, a healthy country village,

and has been subject to be much confined in-doors, her employment having been that of a domestic servant.

A blister was ordered to be applied to the chest, over the seat of uneasiness, and a cough mixture prescribed, containing squills and compound tincture of camphor; also a pill at bedtime for three nights, consisting of pil. hydrarg. gr. j. pil. rhei. co. gr. ijss.

On visiting her two days afterward she expressed herself as relieved in her chest, uneasiness less; her breathing more free; but she mentions having bled at the nose to a considerable extent on two occasions since my last visit, and that she feels weaker.

Two days after I again saw the patient, and found that over her arms, neck, and face, a "rash" had made its appearance, which rash proved on inspection to be petechiæ. The spots varied in size, but the average measurement would be about four or five lines in diameter. Their color was a dark purple, inclining almost to black. The spots were not confined to arms, face, and neck, but existed also on the legs, chest, abdomen, etc. Pulse still 130 per minute; tongue much as at my first visit. Patient mentions having again bled at the nose, and had also expectorated a little blood, about a teaspoonful; and had, moreover, passed something very dark in her urine. I at once saw that she had hæmaturia, which had at least been going on for some hours. From the amount of pain complained of in the iliac and lumbar regions of both sides, I concluded the blood had come from the kidneys or the ureters in the neighborhood of the kidneys. The quantity of blood mixed with the urine must have been considerable. The patient's appearance had now much changed, she looked pale and anæmic, and complained of great weakness and general prostration.

Thinking this a favorable case for the trial of the tincture of the muriate of iron, so highly spoken of by some French physicians, I prescribed two drachms of it in an eight-ounce mixture, of which a tablespoonful was to be taken every two hours. Diet to consist of good fresh meat, mutton or beef, with beef-tea, and bitter beer after dinner. She now informed me that she had not eaten meat for a length of time, because she had had no relish for it. On my explaining to her the necessity for it, she consented to try to eat it, and drink beef-tea. On the day following, the bleedings had ceased, her urine was clear, and quite free from any semblance of blood; her appetite, too, was better. She had eaten a few mouthfuls of meat, and had drank a good deal of beef-tea. Pulse still keeps high, and the petechiæ are the same in appearance as described above. Two days later the improvement noted as having begun at my last visit continued to go on steadily, and the patient expresses herself as much better. Her appetite is increasing, and her tongue fast cleaning. Pulse lowered to 100; hemorrhages have not recurred.

From this time the patient steadily, gradually,

and I may say quickly progressed toward recovery. In a few days more the spots had nearly all disappeared, her strength and appetite increased rapidly, and the pulse came down to 85 beats per minute—a striking alteration.

From the foregoing facts I think it is quite evident that, in this case at least, the patient owed her rapid and good recovery to the muriate of iron mainly, and though I am disposed to believe that the change in the diet was no mean adjuvant in her case, I am satisfied that the iron was the chief cause of the alteration in the state of the patient's blood, or capillaries, or both, which led to the re-establishment of her health. Within twenty-four hours after taking the first dose the hæmaturia had entirely ceased, and the epistaxis and hæmoptysis did not recur. The effect of the iron on the stomach and tongue was no less observable than in the case of the hemorrhages, for the appetite and tongue improved perceptibly soon thereafter.—*Dr. James Wood, in Med. Times and Gazette.*

ACUPUNCTURE OF THE HEART IN SUSPECTED DEATH.

M. Plouviez having performed numerous experiments upon animals, with the object of determining the value of acupuncture of the heart as a means of diagnosis in apparent death, a committee appointed by the Paris Medico-Practical Society terminates a long report with the following conclusions: 1. Acupuncture of the heart employed as a means of distinguishing real from apparent death is an improvement upon auscultation, inasmuch that it is a means more easy of observation and of greater precision, for even when auscultation leads to the belief of the inertia of the heart's action, the needle may, by its oscillations, demonstrate that the action still exists. 2. As far as the experiments on animals prove it, there is no danger in the employment of this means. 3. The oscillations, even after auscultation has proved of no avail, denote the probability of the return of life, the certainty and rapidity of such return depending upon the circumstances which have caused death and the means employed to secure recovery. 4. The exact determination of the amount of utility derivable from the employment of the needle can only be arrived at after future investigations.—*Union Méd. and Med. Times and Gazette.*

DR. LANGSTON PARKER ON THE USE OF MERCURY IN THE TREATMENT OF PRIMARY SYPHILIS.

The principal facts inculcated by the author are embodied in the subjoined *résumé* :—

1. That mercury is not indicated as a specific agent in the treatment of the soft or simple chancre which secretes pus freely, which has no induration of its base, and no complication in the groin.

2. That mercury is not indicated as a specific therapeutic agent in the treatment of the adenitis

which complicates this form of chancre, whether the tumor be of a benign or virulent character.

3. That mercury is not indicated in the treatment of the inguinal chancre which succeeds to the opening or the bursting of a virulent bubo.

4. That mercury may be tried when this form of chancre, or the attendant inguinal chancre, is perfectly chronic, and has resisted the usual routine of non-mercurial treatment. In the earlier stages of these diseases mercury is positively injurious; but in the perfectly chronic stage, as a *dernier ressort*, it may be tried, and occasionally, but not certainly, its use is attended with benefit. In such states a moist mercurial fumigation is sometimes efficacious—a fact which Mr. Parker has ascertained in several instances.

5. Mercury is occasionally useful in the treatment of the phlegmoid induration which sometimes accompanies soft chancres; here its action is limited to the removal of the induration; it has no influence in dispersing either of the forms of adenitis which may complicate it.

6. Mercury is indicated as a specific agent in the treatment of the infecting or specifically indurated chancre. It is the most powerful and certain therapeutic that can be opposed to it. It resolves the indolent buboes which almost always accompany this chancre, and which remain stationary or continue to increase until mercury is used. It weakens or altogether eradicates the dyscrasia, or constitution taint, of which this chancre is the initiatory symptom.

7. Mercury may be given internally, and by way of friction, or administered in the form of vapor. There are cases in which each of these modes may find its special application. Generally speaking, the internal administration is the most injurious to the patient and the least efficacious in its influence on the disease.—*Med. Times and Gazette.*

CAUSE AND CURE OF TAPE-WORM.

In his clinique at the Queen's Hospital, Dr. Fleming has frequently made the cause and cure of tape-worm the subject of clinical remark. This affection prevails to a wide extent in Birmingham, and is often seen in its more severe forms among the out-patients. As compared with Edinburgh, Dr. Fleming observes, that the greater frequency and severity of the disease are very marked. The patients may often be recognized on entering the consultation-room by their worn, vacant aspect,—their trembling gait and hands, staring eyes, and hesitating manner. Many suffer for years, with alternate periods of aggravation and improvement. Of the relation of cause and effect between the measles of the pig, or *cysticercus cellulosæ*, and tape-worm, this town affords ample evidence. Dr. Fleming has ascertained that large quantities of measly pork are sold and used as food in Birmingham. It is not exposed for sale in the public markets, but is disposed of privately, and, doubtless, much of it is employed in the manufacture of sausages. These

are made use of to a large extent by the working classes, and are frequently eaten imperfectly cooked or nearly raw. Dr. Fleming and Mr. Lloyd have found portions of the "measle" in the sausages, with the microscope. Although the worm must be for the most part destroyed in the mincing, it may sometimes escape sufficiently intact to renew its life in the bowels of an unhappy artisan.

Dr. Fleming has made comparative trials of several vermicides in the tape-worm; among others of male fern, kamala, koooso, and spigelia. All are useful, but Dr. Fleming finds the first to be the most efficient and the safest. He gives it thus: R.—Ol. filicis, 3j; mist. acacie, ʒss. M. ft. haust. To be mixed with an ounce and a half of sweet milk and taken at bedtime. The patient must omit the dinner and evening meal of that day. Taken thus, on an empty stomach, the mixture is carried speedily into the intestines, to feed, and, at the same time, poison the hungry parasite which nestles there. Milk is the favorite food of the worm. A large experience leaves no doubt of the great efficiency of this medication. In 1857 Dr. Fleming obtained a supply of the kamala from Dr. Anderson, of the H.E.I.C.S., and was one of the first to use that drug in this country. As a worm-killer, it is often very efficacious, but less so than the male fern; while its action on the bowels and secondary depression of the system are often unduly severe. — *Med. Times and Gazette.*

HYDROCHLORATE OF AMMONIA.

There is a remarkable similarity in the general effects of this salt and the chlorate of potassa. The Germans, especially, have long placed an estimate upon it as an alternative, which has surprised those who have not had considerable experience in its use. Lotions of varying degrees of strength of solution may, in the large proportion of cases, be advantageously substituted for the more expensive stimulating liniments usually directed. It thus forms a cheap and efficient rubefacient and discutient, well adapted for prescription in general practice. In many forms of cutaneous disease, characterized by temporary improvement under the application of local remedies of a stimulating nature, it is particularly beneficial. Thus, it is especially useful, both exhibited internally and employed externally, in connection with the arsenicals in treatment of original squamous affections, and where, in other varieties of tegumentary eruption, the furfuraceous surface is presented. Acne is often well controlled by its local application. As a discutient of slow glandular enlargements, it may rank with or next to iodine, and has the advantage that it does not discolor the part of application.

As an alternative, liquefacient, resolvent, or promovent of cell and tissue metamorphosis, it is worthy of the high rank which our German confreres assign it—ordinarily improving diges-

tion and renovating the secretions in a marked degree. Western practitioners, who have had much experience with it, given in full doses, in combination with quina, assert that the system is left in a much better condition than when the latter is given singly, and that the necessity for administration of mercurial and other cathartics is very materially lessened or altogether removed.

The same peculiarities fit it for valuable exhibition in many obscure neuroses, where defective irregular innervation is the prominent symptom. We beg leave to recall the attention of the profession to this old remedy, as well worthy more frequent trial than it now receives, sensible, as we are, that, under judicious use, it will by no means as frequently disappoint in result as many newer and more fashionable medicines. — *Chicago Medical Journal.*

ON THE CAUSE AND TREATMENT OF STERTOR.

The cause of the loud and deep laryngeal sound which is known as stertor, is in general owing either to a partial paralysis of the soft palate, or to a falling backward of the paralyzed tongue, or to a collection of mucus in the pharynx and air-passages. In repeating Marshall Hall's experiments on respiration, the author found that the closure of the pharynx by the tongue was the usual cause why air would not penetrate into the lungs. On the other hand, when the body was placed in such a position that the partially-paralyzed tongue would fall away from the posterior wall of the pharynx, artificial respiration was easily carried on. This fact proves of how much importance is the position of the body in attempts at resuscitation. Syme relates that he saved a patient who was threatened with asphyxia from chloroform, by simply pulling forward the paralyzed tongue by means of a hook. The author brings forward cases in which stertorous breathing was entirely removed by merely changing the position of the patient. One is a case of sudden apoplexy, in which the stertorous breathing was arrested by merely turning the patient on her side. The second is a case in which a man, dying from inflammation of an emphysematous lung, had the stertorous breathing removed and his life apparently prolonged by the same means. The third case was one of stertor, following a succession of epileptic fits; here the stertor was relieved, and recovery undoubtedly hastened, by placing the patient on his side. A fourth case is one of typhus, in which the patient was dying in a state of coma. The author then observes: The change of position must, of all the parts concerned in giving rise to stertor, affect principally the tongue. When the mouth is shut, the lower jaw is almost at right angles to the spine, and the symphysis is then farthest removed from the vertebral column; the root of the tongue does not come into contact with the posterior wall of the pharynx, on account of the muscles that hold it forward, the genio- and hyo-glossus not being long enough. But on opening the mouth, or by anteflexion of the head, the

symphysis of the jaw describes a curve in the direction of downward and backward, and the root of the tongue must approach the posterior wall of the pharynx—a fact which was proved by direct observation on the dead body.

In experiments performed on himself, the author found that snoring and stertorous breathing through the mouth were not easily produced when lying on the back with the mouth open and the head bent backward. Deep, vibrating snoring during sleep, with the mouth shut, is owing to the nasal pharyngeal opening being obstructed by the tongue pushing the soft palate upward, which is thus thrown into vibration by the passage of the air. Sometimes the soft palate sinks down on the tongue, the mouth being half opened, and vibrations are then produced. These two varieties of stertor are described as "palatine stertor." The rough, sharp sound which is heard in apoplectic patients, with the mouth wide open, is formed low in the pharynx, and is caused by the passage of the air to the lungs being obstructed in consequence of the root of the tongue closely approaching the posterior wall of the pharynx; this is pharyngeal stertor.

The above observations meet with their application in the treatment of apoplexy. In those cases, for instance, in which no effusion of blood has taken place, but where there is only cerebral congestion, caused either by valvular heart disease, aneurism, or derangement in the pulmonary circulation, it is evident that everything that tends to obstruct the circulation must exert a most injurious influence on the disease. For instance, a subject of diseased heart, after some violent exertion, is seized with apoplexy. Placed in bed, and laid, as is generally the case, on the back, his breathing suddenly becomes stertorous, respiration is rendered more difficult, congestion of the lungs follows, the right side of the heart is overloaded with blood, the veins of the neck and brain become gorged with half-oxidized blood—which engorgement acts as a mechanical cause for effusion, to take place from the already overloaded cerebral vessels. If the patient, however, is placed in a proper position, respiration will go on freely, and his chance of recovery will certainly be increased. More particularly is this the case when the cerebral congestion is connected with a diseased state of the arteries, as is so frequently the case, as under such circumstances even a moderate obstruction to the circulation will act as a cause of effusion. In other cases of apoplexy where effusion has already taken place, particularly as the result of fracture, our chance of saving the patient with appropriate treatment will be much diminished if the respiration is stertorous, so that the return of venous blood from the injured part is interfered with. In many such cases the mere change of the position of the patient may decide the question as to his death or recovery.—DR. BOWLES, *Schmidt's Jahrbücher; Pacif. Med. Journ.*

REVIEWS AND BOOK NOTICES.

A Treatise on the Practice of Medicine. By EDWIN R. MAXSON, M.D., formerly Lecturer on the Institutes and Practice of Medicine in the Geneva Medical College. Octavo, pp. 705. Lindsay and Blakiston, Philadelphia. From the Author. (Second Notice.)

To enter the arena with Watson, Wood, Dunglison, Drake, Dickson, etc., and compete for public favor, is a no small undertaking. As to attractiveness of style, Watson's work is unsurpassed; but calomel and blood-letting enter quite too largely into his means of cure to meet the requirements of the present age and the modification of diseased action, as it at present manifests itself. Wood's and Dunglison's Practice are both erudite and reliable works, but are rather too voluminous to serve as text-books for students.

After a tolerably careful examination of the work before us, we are disposed to regard it as a valuable addition to our medical literature. In its pathological views, or therapeutical directions, the work is not particularly original, nor is it in style and matter unamenable to criticism. In some modern works upon practice of medicine, the authors give a great variety of opinions as to the different methods of treating the various diseases, but almost invariably withhold their own. Thus, the student and young practitioner are embarrassed in their search for the *very best treatment* of any disease that may be under consideration.

In the work before us, there is no such embarrassment; the author's own opinions are brought prominently forward, and the opinions of others are quite rarely referred to. This, to the reader, betokens a little vanity, or an idea of self-sufficiency on the part of the author. He, however, disclaims any such feeling, and says: "While I have preferred to give my own opinion of remedies, and in fact of almost everything else of which I have treated, it has been from no feeling of ostentation, but simply because I believe I am better qualified to give my own opinion than to hold up the opinions of other men, which in turn they can do much better than I could do it for them." We consider it no detriment, in a work upon the theory and practice of medicine, to find an author's own views distinctly stated.

In the work before us, many of the most approved new remedies and new preparations are introduced—a novelty never before attempted in a work of the kind. The author's therapeutic directions are concisely given, based upon distinctly stated indications, and mostly on a level with the present advanced condition of the healing art. There are a few exceptions to this; but we have not the space to specify. We will simply instance his treatment of acute dysentery. Five grains of Dover's powder, with *two of tannin*—every four or six hours—is not the best treatment for this disease, even if it has been preceded by a cathartic of calomel and rhubarb.

We should be happy to analyze the work, and thus give our readers an idea of its contents and merits, but want of space forbids. Suffice it to say, the work will pay perusal, and the student and practitioner will find it a safe guide in practice. The publishers have done their part in admirable style.

o. c. g.

Republication of the London Lancet. New York: James Herald, No. 24 Ann Street. Monthly. \$5 per annum.

It may not be generally understood by the profession that the *Lancet*, in its original form, is published weekly. In this country it is republished as a monthly, and all the more important portions of its weekly issue are thus placed, at about one-half the original subscription price, in the hands of those who patronize it.

Those of our readers who, in addition to their domestic journals, wish to take a foreign one, cannot do better than to subscribe for the *London Lancet*. It is an old and popular journal; from the first it took a high rank, and has ever since maintained its popularity with the more intelligent members of the profession. An evidence of its popularity is found in the fact that it has been republished in this country sixteen years; and now, when more than half of our own journals have been discontinued because of the troublous times, its republication is continued. We never would advise an American physician to subscribe for a foreign journal, who did not take one or more published in his own country. With a journal that, besides its unsurpassed original matter, gives a complete summary of all practical matters in all our domestic journals, as does the *REPORTER*, the addition of a foreign one like the *Lancet* will post the reader thoroughly in all medical matters.

o. c. g.

The Principles and Practice of Obstetrics. By GUNNING S. BEDFORD, A.M., M.D., Professor of Obstetrics, the Diseases of Women and Children, and Clinical Obstetrics, in the University of New York. Author of Clinical Lectures on the Diseases of Women and Children. New York: Samuel S. & William Wood, 389 Broadway. 1861, pp. 750. Price \$4 50.

We have read no work upon this most important branch of medicine for many years, which has afforded us so much unalloyed pleasure, gratification, and profit. It consists of forty-six lectures, the substance of which was delivered to the students of the University of the City of New York. The style is not, therefore, of that cold, didactic character which freezes the reader as he peruses its exactly measured sentences, and which operates as a soporific upon all his senses; it is plain, fresh—welling up from an exuberant fountain—compact. The thought intended is accurately conveyed in appropriate language, and the whole work exhibits the careful preparation of the successful teacher.

As the author of an excellent work on "Dis-

eases of Women and Children," the seventh edition of which is soon to be issued from the press, Dr. Bedford is not unknown to professional fame. The favorable reception of that work has prepared the way for the one now issued. In this work, the author "presents to the profession a practical book;" and hence enters into all the minutiae of the lying-in room, giving the young practitioner just the instruction which, as a tyro, he absolutely needs. If, in this respect, the instructions shall appear too minute and verbose to the older practitioner for a scientific work on obstetrics, he should bear in mind that the author had before him one great cardinal object, "to be useful;" and that this feature will render his work doubly valuable to the student. While, therefore, the latter may regard it as a guide which will conduct him safely and surely through the labyrinths of the art, the former can hardly fail to derive some lasting benefit from the results of twenty years of teaching, and a much longer period of well-cultivated observation and experience, which are embodied in its pages. The plan and arrangement of the work is at once comprehensive, systematic, complete, and fully posted up to the existing state of the science. Whatever new ideas of real value have been enunciated are incorporated in its pages.

On the use of instruments, the author is conservative. He regards the "proper employment of the forceps as one of the undoubted boons which science has placed within the reach of the conscientious and skillful accoucheur," but "in reckless and unskillful hands, as an instrument of fearful destruction." While, therefore, he condemns their indiscriminate use on every fancied necessity, he would not have the practitioner fail to use them when a "moral justification" exists, or when their use "shall secure the maximum of good, viz., safety both to mother and child." And he enforces these precepts with practical illustrations from his own experience and observation. So, also, in regard to anæsthetics. Considering parturition as a natural process, strictly speaking a physiological function, he would tolerate no interference with it, so long as its exercise is normal; and would employ anæsthesia only in cases of exaggerated suffering. His views upon these points are not only eminently conservative, but strictly in accordance with the dictates of humanity and of science.

The work is admirably illustrated and elegantly printed. It has received the high encomiums of the foreign medical press, so far as notices of it have come to our knowledge, and we have no doubt it will be regarded as a standard authority in obstetrical science.

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Dr. David Wooster, editor of the *Pacific Medical and Surgical Journal*, has been appointed Medical Director for the Army, of the Department of the Pacific. He has resigned the editorship of the journal, which has been assumed by Dr. James Blake, late of Sacramento.

THE MEDICAL AND SURGICAL REPORTER.

PHILADELPHIA, SATURDAY, JANUARY 25, 1862.

REMOVAL.—The office of the **REPORTER** has been removed to the N. E. corner of Seventh and Sansom Streets, below Chestnut. Correspondents will be careful to note the change. tf.

THE SANITARY COMMISSION—*CUI BONO?*

On the thirteenth day of June, 1861, a little more than seven months ago, the Sanitary Commission, which has figured so prominently before the public eye since, was ushered into existence. The signature of the President gave the finishing touch to the appointment. On the same day its plan of organization was adopted and approved by the Secretary of War, and its wheels set in motion. Its members sought no "pecuniary remuneration from the government." Indeed the suggestion of such compensation was thought to be derogatory to the dignity and independence of the Commission. "Its motives being humane and patriotic, its labors will be its own reward." It grew "out of no charges of negligence or incompetency in the war department or the medical bureau." "One of its highest ambitions is to bring the volunteers, with which it is chiefly concerned, up to the regulars in respect of sanitary regulations and customs." Committees and sub-committees were duly appointed, and by the most impassioned, stirring, importunate language, the sympathies of the people were roused in its behalf. Contributions were solicited, of money, of supplies of every description for the wants of the poor soldier. Their pleadings, based upon actual facts of suffering and want in the camps of the raw recruits, who had been hurried off to the war without giving time for complete preparation, or hardly knowing what was needed for their comfort or convenience, were not in vain. The Sanitary Commission became at once the center toward which fond hearts looked as a medium through which their overflowing sympathies might find ample vent. Till recently its working staff consisted of a secretary and treasurer, and six inspectors. The number is now increased to fourteen, (all of whom are physicians,) at a salary of twelve hundred dollars each per annum. The duty of these inspectors is twofold:—

First, they "travel from camp to camp, pointing out defects and suggesting improvements in

camp police, ventilation of tents and quarters, drainage, camp-cooking, the supply and quality of water, and generally in everything that bears on the health of the command."

Secondly, they are to "give officers in charge of military hospitals not only professional aid, if desired, but extra hospital clothing, food, medicines, vaccine virus, and stores not included in the government supply-list, or which the government cannot promptly provide."

The secretary and treasurer, we believe, both of them receive also liberal salaries, and there are six other gentlemen who are assigned to special duties. These are the working agents by whose inspection, inquiry, and advice, the important objects in view are to be accomplished; and to aid the Commission in their great and arduous labors, the government has given them every facility they required. A storehouse for its supplies is provided; offices in which to transact its business are furnished; "horses, ambulances, army wagons, for its inspectors and other agents, and every facility for visiting camps, hospitals, and military posts," are supplied gratuitously. Moreover, the officers of the army were all instructed to further their inquiries, and the privilege is also granted of freely corresponding with the war department and with the medical bureau.

With all these excellent facilities for the prosecution of its humane and patriotic work, what are the results the Commission has achieved?

Here we are met by a statement purporting to come from the Commission, through its officers, which affords but little promise of marked success in our inquiry after results. They say:—

"The result of a large portion of its (the commission's) labors is necessarily *negative*. So far as they are successful, they furnish nothing that can be stated in a definite, tangible form."

Notwithstanding this somewhat unpropitious announcement, let us proceed with our investigation. We use the late report of the secretary of the Commission as our authority.

It has visited every camp from St. Louis to the Potomac, and inspected every regiment, ascertained the quality of food and water, cooking, ventilation, police regulations, clothing and hospital accommodations provided for the men. It has ascertained precisely how many of the army are native Americans and how many are foreign born—a point, it must be confessed, of large practical importance in a sanitary point of view, and especially in a war in which nativity, sects, and parties are all obliterated by the common outbursting of patriotism and love of

country. We almost wonder the Commission did not extend its inquiries a step further, and tell the world what sects were predominant in the army.

In regard to cleanliness of camps, they say 5 per cent. are in admirable order; 45 per cent. fairly clean and well policed; 26 per cent. negligent and slovenly; and 24 per cent. filthy and dangerous. So large an army was probably never so well supplied with clothing. The regulation articles of food are "acknowledged to be had in great abundance, and their quality, in nearly all respects, is satisfactory to the men." In respect to hospitals and hospital arrangements, they tell us that in the 200 regiments, 105 have good regimental hospitals; 52 indifferent or tolerable; 26 bad; and 13 have none. From four no report was obtained. The average constant number of sick per 1000 men has been 63; in the department of Western Virginia, 62; in the valley of the Mississippi, 116. The average mortality of the army of the Potomac has been $3\frac{1}{2}$ per cent., or for the whole army 5 per cent. Of the regimental surgeons, only 4 are reported incompetent. How this fact is ascertained, or what is to be done with those so reported, we are not informed. "Of the volunteer surgeons, seven-eighths are fairly qualified for their duties. The average grade of scientific attainment and practical experience is reasonably high." We are pleased to record such testimony to the abilities of those to whom the lives and health of our noble volunteers are committed, and also to learn that the few incompetent surgeons are those who, by appointment of the governors of the States where the troops were raised, escaped the rigid examination instituted under the direction of the medical department of the army.

But not to pursue our investigation further in this direction, in which we find the Commission giving the results, not so much of their own energy and efficiency, as paying a just and merited tribute to the State and National Governments, and especially to the medical bureau, let us search for something "tangible" as the end of all its herculean labors; and here we find it in all the glory of italics. [The italics are not ours.] "*It has provided for the vaccination of more than twenty thousand men.*" We commend its consideration. It has done a good work. But this is only a small fraction of the great army, and the whole amount of credit due the Commis-

sion for performing this tithe of vaccination, is that it has been the almoner of the public charity in this particular, and relieved the medical bureau, always ready and able to perform its whole duty in protecting the army from this dreadful scourge, of a portion of its labors.

But further: During the month of November, besides a large bulk of unclassified articles, it distributed 34,480 articles of clothing from the Washington depot alone. These were issued to 136 hospitals, giving each an average of a little more than 200. About 1000 articles are now distributed daily from the same depot, and their value is not less than \$500. At the Cleveland depot 69,000 articles have been received since its organization, and 51,000 distributed. Several tons of hospital diet have also been issued at that point. At Wheeling 4814 articles of bedding and clothing have been issued to the army by the agents of the Commission, the whole amounting to the sum of \$40,000. What it has cost to distribute these various articles, the Commission does not enlighten us. Through the agency of the government it would have cost comparatively nothing.

Further still: The Commission have received in cash, up to the 25th of November, \$28,100, and on the 20th of November their disbursements had been:—

Traveling expenses of inspection.....	\$2,079 00
Compensation of services for inspection	3,480 36
Traveling expenses of commissioners...	1,640 13
Office expenses, including services.....	1,036 24
Printing and stationery	1,823 95
Postage	397 19
Telegrams.....	90 29
Freight.....	888 66
Soldier's Home at Washington	1,195 00
General Hospital	2,392 74
Regimental Hospital.....	572 59
Storehouse expenses at Washington	660 88

\$16,256 98

Now it should be borne in mind that every dollar of this fund was the offering of humanity and benevolence for the benefit of the sick and wounded soldier in the camp and hospital, and every dollar thus contributed, it was carefully estimated, "honestly and judiciously expended in sanitary measures, will save at least *one soldier's life.*" This was the potent wand to conjure with. This "*one soldier's life*" drew forth the sympathies and dollars of the people into the treasury of the Sanitary Commission. This—its holy mission—gave unwonted power to its appeals, and crowded its depositories with everything which the outpourings of affection or patri-

otism could offer. And yet little more than one-eighth of the money contributed has been expended for the direct benefit of the poor soldier. The remainder has been paid for salaries and expenses of the Commission, and its expenses are now graduated to the scale of \$5000 per month, or \$60,000 per year. The Commission thus, whose humane and patriotic "labors will be its own reward," and who "freely give their time, experience, and labor to the country," first of all appropriate to themselves a liberal salary from the donations of charity, and allow the soldier but a pittance of what was dedicated to his comfort and welfare.

Such are some of the results of this loudly-trumpeted Sanitary Commission. By its industrious painstaking it has accumulated a large mass of statistics and facts, some of which will be quite important to the antiquarian of future ages, others of which have little or no connection with sanitary science, and a few of which are valuable. In all we find strong and conclusive evidence, not so much of its own efficiency in initiating and carrying into operation sanitary measures for the well-being of the vast army now in the field, as of the energy and industry of both State and National Governments, and of the medical bureau. Without the well-regulated, properly-balanced, and complete machinery of the latter, the labors of the Commission would have been only as a drop to the mighty ocean. And yet, if we rightly read the reports which have come to our knowledge, the Commission would fain displace the machinery which, for more than twoscore years, has accommodated its capacity and dimensions fully to the demands of the army, and of the government, to make a cozy nest for some of its own adherents; or, to speak without figure, it has come in collision with the regularly constituted medical authorities of the government, and itself created the necessity for the step which was foreshadowed in its organization, that "it will disband should experience render its operations embarrassing to the government, or less necessary and useful than it is now supposed they will prove."

Ventilation with Pure Air.—A writer in the *Lancet* suggests that hospital and other buildings might be ventilated by bringing air in underground pipes from some healthy district in the country, or from the seashore. Water is thus brought into cities, and it would seem that air might with greater facility and less expense be thus conducted.

EDITORIAL NOTES AND COMMENTS.

Quinine as a Prophylactic in the Army.—The following remarks, from the *Chicago Medical Journal*, are on a subject which is at this time attracting much attention. We cannot believe that the dosing of every soldier in the army with quinine has been seriously urged or contemplated. The period of the existence of malarial emanations is not long, and no one would think of continuing to give quinine as a prophylactic to soldiers at the present time, while marching over a frozen soil.

The dosing with quinine in a portion of the army has been very extensive, and in some regiments so universal that the surgeon's-call has been named "the quinine."

"Let us look at the matter in an economical point of view at the outset. Of the army of five hundred regiments, it is a moderate estimate that one-half will, if the war continues, be removed into the realms of Dixie and malaria, so that the prophylactic will be in daily requisition. Five grains to each person connected with a regiment, not including camp-followers, teamsters, etc., will involve the use of (in round numbers) ten ounces of quinine, or more exactly, about eleven of the ordinary ounce bottles, or for the two hundred and fifty regiments requiring its use, two thousand seven hundred and fifty bottles *per diem*! But discard seven hundred and fifty bottles for failures in exhibition, hospital patients, recusants, spiritualists, homeopaths, etc., and there still remains a net two thousand bottles of quinine, with all its well-known imperfections on its head, to be purchased by the government to be forced down the throats of our brave soldiery, *volens volens*. And this to be continued eight or at least six months in the year—say three hundred and sixty thousand bottles. At the necessarily enhanced price of the article, the cost to the government would fall little short of a million of dollars. Such an expenditure is not lightly to be made, to say the least of it.

"It is scarcely more than a dozen or fifteen years since the doctrine was largely entertained in the malarious regions of the West, that malaria penetrated and pervaded all things as a subtle poison; that it was held in solution in the water, suspended in the atmosphere, lurked in the finest roast of meat, and laid in ambush in the wholesomest-looking loaf. All constitutions were impressed by it, and all diseases modified by it. To this wholesale assumption another was brought as a fellow, that quina is the antidote to malaria wherever concealed and however manifesting its noxious influence. The practical result was that all the adults took quina with their morning coffee, and the children with their bread and milk. History records its immense consumption and consequent enormous price. The writer has taken it

daily for months in succession, with frequent recurring chills notwithstanding, until thirty grains became the ordinary and necessary anti-periodic dose. Scores and hundreds of Western practitioners have seen its eventual failure as a prophylactic, and the rapid tolerance established. Quina is still largely and generally used, but with discrimination and judgment, and not under the guidance of the malarial and antidotal dogma. The rule now is quina for the emergency—the paroxysmal development—other tonics and regimens for prophylaxis. The best of all prophylactics is good health, to be maintained by appropriate hygienic measures. So long as good health is present, there is little danger of attack by any of the multiform varieties of so-called malarious disease. But let the causes of debility operate, and during the hours of depression the ague and its congeners are potent for evil. Comfortable clothing, dry feet, regular and sufficient sleep under shelter, good digestible food regularly eaten, a pint of good coffee both before and after standing guard; judicious medical attention to the condition of the digestive organs, and to occasional diseases,—these and similar obvious methods will prevent more outbreaks of malarious disorder than any mere medical prophylactic. Does not the medical profession yet see that the larger portion of its duty is not exhausted in inventing new drugs, or the revival of obsolete methods of exhibition of old medicines?"

Maine Insane Hospital.—From the report of Dr. Henry M. Harlow, the Superintendent of this Institution, we learn that the number of patients in the hospital, November 30, 1860, was 240; 131 males and 109 females. Admitted during the year, 135; 77 males and 58 females. Total number under treatment, 375; 208 males and 167 females. Discharged during the year, 123; 74 males and 49 females, leaving in the hospital at the close of the year, 252. Of those discharged, 55, or about 25 per cent., were recovered; 25, or 10 per cent., improved; 16, or about 8 per cent., unimproved; died, 27.

Since the opening of the hospital, in October, 1840, 2398 have been admitted. Of these, 2146 have been discharged; 989 recovered; 416 improved; 416 unimproved; died, 325.

The superintendent, in his able report, says: "The demand for increased accommodations for this class of our unfortunate citizens has not in the least degree diminished by the lapse of time. On the other hand, the want becomes more and more pressing every year." During the year, some thirty applicants have been refused admission to the hospital for want of room. A new mode of artificial ventilation has been introduced,

together with a more efficient plan for thoroughly warming the building. A farm, consisting of 220 acres of land, is attached to the hospital, on which considerable of the labor is performed by the patients, thus affording them a most healthful exercise and a powerful auxiliary in promoting their recovery. The female patients are employed in-doors, in the manufacture of useful articles. Religious services are attended every Sabbath in the chapel, and those patients who have a taste for reading, have access to a large and well selected library of 2000 volumes, and also the standard literary periodicals of the day, and newspapers of the State. The superintendent remarks:—

"No disease which infests man during his earthly sojourn is so mysterious, so far beneath the ken of finite research, as that of insanity. All we can know of it is from its signs or manifestations. We can observe its varied types and manifold shadows as they flash from the glaring eye or flit across the face, or dash in the wild gesticulation through the air. We can hear the painful sound of the voice as it falls in sad and solemn cadence, or rises with incoherent thought, uttering joy ecstatic, or bursting with the wildest fury of passion. We can see and hear all this; but we know nothing of the hidden springs within, which give rise to such phenomena. We can examine the body and note all physical signs which present themselves, and, after death, with the aid of the scalpel and microscope, we can visit the deep, dark chambers of the brain, where has 'lulled many a hidden thought,' but nothing there remains save deserted halls and a net-work of machinery—no soul is there to set the wheels in motion and explain the wonder-working mystery.

"This much, however, appears obvious—that so intimately connected and interwoven with each other are our mental and physical organism, that whatever affects the one is immediately felt by the other. Says an English writer on this point, 'the mind and the body, like two musical instruments contiguous to each other, are so constituted that if a chord in the one be touched, its vibrations are instantly felt or reciprocated in the other.'"

Salting Railway Tracks.—This question is just now brought prominently before the public in this city and in New York, by the proposition to prohibit the practice entirely. The practice originated in the idea of economy in expense, it being alleged that the railway track can be kept in a condition for the passage of the cars at much less expense and with vastly less hinderance to travel, than by the slow and tedious process of carting the snow away. On the other hand, it is

claimed that the presence of so much salt in our thoroughfares tends to produce disease, especially diphtheria and kindred diseases. It is only in this aspect of the case that it comes within our notice as medical journalists. In Select Council, the subject was referred to a committee, before whom testimony has been taken pro and con, with a view to enable them to arrive at a correct decision in the premises. The statements of Professor Rogers, of the University of Pennsylvania, are as follows:—

"He said that common salt was not a volatile substance. It would have a salubrious effect on the streets and the atmosphere, rather than otherwise. Salt and snow were apt to cool the air and render it more dry by condensing it and absorbing gases. A large amount of fluid matter might lie in the streets, through a mixture of salt and snow, but more moisture would not necessarily exist in the atmosphere, although salt and snow are colder than snow alone. The temperature of snow is 32°. Salt and snow are more fluid than snow would be when softening, but the fluid is not, in the least degree, more penetrating. Salt and snow, when melted, does not freeze again, whereas the latter, in an unmixed state, does. If we walk in water formed by salt and snow, there is no more chance of catching cold than by walking in pure water. Moisture from salt and snow is not likely to be retained longer than the moisture from snow itself. A person's feet would remain moist a longer time, after being wet with snow water, than with the water of snow and salt, although the slush of the latter is colder. He did not think vegetable colors would be changed in a greater degree by an admixture of salt, than by pure water alone; it is perfectly neutral. The professor was not positive whether it would affect leather more than mere snow water. He decidedly recommended melting snow by salt, and thus rapidly banishing its damp and penetrating vapor from the atmosphere. He considered that its effect on the feet of horses was not injurious, and that it was far better for them to travel through salt and snow for a short time, than through snow slush for a longer period."

Dr. Malone concurred entirely with Professor Rogers, and considered that "salting the streets was rather a healthful advantage than otherwise, inasmuch as it shortened the time of bad walking and damp atmosphere."

Mr. Whitall, a school teacher, stated that, "from his experience, feet would dry slower after being wet with salt and snow, than with snow and water alone." He is a teacher of twenty years' standing, and "finds that children now complain more of cold feet in school than before salt was used in the streets." Still he could give no statistics to confirm his opinion,

arguing "much from his own constitutional peculiarity." Others testified as to the health of employees on the roads, not one of whom had had diphtheria, although occupied sixteen hours in every twenty-four, on the road.

At the adjourned meeting of the committee on Friday, Professor Rogers said:—

"That he had made an estimate of the amount of salt in the street slush. In no case did it come up to that of sea water.

"Thus, the slush is a brine not half as strong as sea water. The temperature of the snow during the melting is reduced five degrees; afterward the water obeys the laws regulating any other water, and becomes warm.

"If you put a large quantity of salt in the water, you cannot freeze it at zero. The salt slush, accordingly, continues to run off into the sewers all night.

"I should have mentioned the other day that salt water will not rot leather as quickly as fresh water. If you take a very strong solution of salt you cannot wet a piece of leather with it at all."

Professor Rand, of the High School, "did not think the health of any one was affected by the sprinkling of salt upon the streets." He concurred in the main with the views of Professor Rogers, as did also Dr. Kenderdine and Mr. Essinwin. To the same purport is a letter of Dr. Agnew to the committee, and one from Dr. P. B. Goddard. The expression of professional opinion is therefore thus far very decidedly in favor of the salt. Further testimony is to be taken next week on the subject.

In New York City the ordinance against salting railway tracks has become a law, we judge without very thorough investigation.

Sanitary Legislation at Albany.—Our readers are aware that for several years past attempts have been made to provide the City of New York with an efficient medical sanitary police. A bill has been presented at each session of the legislature for several years, which was carefully drawn, and calculated to meet the sanitary wants of that great metropolis. It had the support, too, of the chief moneyed interests of New York, including the Life Insurance Companies and the principal mercantile houses, as well as that of the medical profession of the city and State.

But the bill had unscrupulous opponents among politicians and placemen, who left no means untied to defeat it, in which they succeeded. *How* it was accomplished seems to be revealed in the following passage, which we clip from the pub-

lished proceedings of a recent meeting of the New York Board of Aldermen. We trust that the legislature now in session will give the subject the consideration its merits deserve, and that its members will at least not lay themselves open to the charge of bribery and corruption. We learn that the charge is to be made a subject of inquiry by the present legislature.

"The annual report of the City Inspector was received.

"Alderman Boole moved that 5000 copies be printed.

"Alderman Brady thought that 1000 copies were enough. There was no use printing a large number to kill the Health bill in the legislature. They had killed it three years by hard dollars, and that was where they beat the doctors. *He knew the legislature could be bought. That was what they got the bills up for. He had been up to Albany last year and bought up the legislature.*

"A voice—How much did it cost?

"Mr. Brady—Well, sir, I took up \$6000, and slept on it between two beds, at the Delavan House. I had to come down to get \$2000 more. But they may pass whatever bills they like; we won't interfere with them."

Newark, New Jersey, Dispensary.—This enterprise was organized in December, 1857, its object being "medical charity, and the gratuitous furnishing of medical advice and medicines to the poor of the city." The whole matter is under the control of the most skillful physicians of the city, and the dispensary is open every day, (Sundays excepted.) The work is divided into male, female, and vaccine departments, with physicians regularly allotted to each. The dispensary is designed only for the relief of such persons as are able to apply personally, for treatment. Those who are unable to walk out, come under the care of district physicians. A hospital department is also connected with the dispensary, furnished with beds and other necessities. Over 5000 patients have already been treated since its organization, and over 24,000 prescriptions dispensed. We are pleased to notice the establishment of an institution of this kind in a neighboring city, because it adds another to the many instances in which the profession of medicine, in a quiet and unostentatious manner, is contributing its full share to the alleviation of the ills of humanity.

But is it not time that the City of Newark, which contains a population of over 60,000, had a hospital building and a fully organized hospital? The Medical Association of Newark, and the Medical Society for the County of Essex,

are both efficient organizations, and include some of the best physicians and surgeons in the State in their membership. Newark certainly *needs* a hospital, and has able men to fill the medical and surgical appointments of one. Why should there not be a hospital of 250 beds in Newark? We commend the subject to the consideration of the profession of that city, and of the city and county medical societies.

Hospitals at Alexandria.—There are three hospitals at Alexandria in active operation: the Mansion House, Fairfax Street, and Washington Street. Two new buildings are soon to be opened for the same purposes; Dr. J. B. Porter, of the United States Army, is the surgeon in charge. His staff consists of Drs. Robert K. Smith, Thomas P. Gibbons, J. Bernard Brinton, and Mitchell H. Picot, of Philadelphia. There are 700 patients in these hospitals. The medical department proper, it is said, is most admirably administered. The surgeons are accomplished and able. The patients are carefully and promptly attended. The ward rooms are clean and comfortable, well warmed and ventilated; the diet for the sick is wholesome, generally well cooked, and such as is most suited to the sick and convalescent. Female nurses are employed in these hospitals, but seem, for some cause, not to give satisfaction, their presence serving to irritate and annoy the patients.

The Mansion House contains beds for 516. The Fairfax Street, for 110; and is under the professional care of Dr. Robertson, of Cumberland, Pennsylvania, who manages it alone, superintending every department and performing the duties of steward, apothecary, and clerk. The Washington Street hospital is under the care of two brothers, Doctors Thompson, of Pennsylvania, and is well conducted. Many of the surgical cases are treated here.

These hospitals are all under the direction of the medical bureau of the army, and evince the industry, energy, efficiency and entire success with which that department, *as at present constituted*, is conducted.

Professional Pleasantries.—Dr. Bauer, of Brooklyn, New York, whose very valuable Lectures on Orthopædic Surgery are now being published in the *REPORTER*, and whose clinical studies and instruction in this branch of surgery have rendered him distinguished as an orthopædic

surgeon, made a flying visit to our city during the last week. He was most cordially received and entertained, and made the acquaintance of several of the professors in our colleges. At Professor Pancoast's Clinic on Wednesday, Dr. Bauer was introduced to the class and was cordially greeted. It so happened that several cases of *talipes*, both for operation and for exhibition of progress in cure, were presented before the class, giving Professor Pancoast an admirable opportunity of vindicating the utility and practicability of his favorite operation for the radical cure of that deformity. The operation, which consists in dividing the soleus muscle at its insertion, instead of the tendo achilles, was performed in several successive cases, exhibiting different varieties of the deformity, and with such complete success as to elicit the warm commendations of Doctor Bauer, who saw the operation now for the first time, and who, after carefully manipulating the limbs both before and subsequent to the operation, expressed himself to the class as entirely satisfied that the *utile cum dulce* were appropriately mingled in it.

Correspondence.

DOMESTIC CORRESPONDENCE.

MESSRS. EDITORS:—I have been particularly gratified by your article on the "*Sanitary Commission*." You have spoken my views of it better than I could have done it myself. It is one of the most *anomalous* births of the present time, an insult to the medical profession, and a collection of heterogeneous materials.

No class of men have performed so much gratuitous labor for the health of the community as physicians, and here is a "Commission" made up of clergymen and laymen, with a spice of physicians, to do—what? Just what the noble army-staff of medical men are appointed and expected to do; and, as you say well, from aught that appears to the contrary, have ever done.

I have been waiting, and wondering that the journals have not spoken out before upon this subject, and I thank you that you have not only spoken once, but promise to speak again. Let us have it. Let the clergyman stick to his pulpit, the laymen to his appropriate calling, and the medical man to his profession of promoting the health of all.

C.

ARMY CORRESPONDENCE.

We glean the following from late correspondence. A member of the 69th P. V., under date of January 12, writes:—

"Our camp *was* a cornfield belonging to a 'very quiet secessionist.' We have had bad weather for some days past, and our camp ground has been a perfect mud hole. This morning, however, the sun shone brightly and the walking was passable. Three companies are away at Conrad's Ferry, two on picket duty, and the others engaged in building a fort near the place where the Ball's Bluff disaster occurred. We have been in reception of Sibley tents some time past. The men are much pleased with them, because they are comfortable. When lighted up, they present a very picturesque appearance. Our men are well satisfied with the staff and company officers. We are supplied with plenty of good rations, especially bread, which is baked in camp. The health of the regiment is remarkable. We have not had in the hospital more than eight, on an average, since we left Philadelphia, and but two deaths—one that of an *old man*, and the other one who contracted disease before joining the regiment. The medical department is ably filled by Drs. Bondaught and McNeil, of Philadelphia. Our hospital accommodations are but meager, having nothing in our possession capable of comforting the sick. During the week that has passed we have received from some kind association blankets, pillows, quilts, stockings, and some jellies. Miss Dix paid us a flying visit to-day, complimented us on the health of our camp, and promised that she would remember us when she arrived in Washington."

A letter from the 71st says:—

"The health of the regiment is generally good, there being only from fifteen to twenty men in hospital, and about a dozen in quarters.

"There is a fine hospital now in process of erection, under the direction of Lieutenant C. White, of Company H.

"The hospital will be finished in the course of a week or ten days, and the sick removed from their present poor quarters.

"I should not forget to mention two large ovens that were also built by Lieutenant White, and from which the men daily obtain sweet, fresh bread.

"The regiment is gradually recovering from the shock it received at Ball's Bluff, and are fast regaining their perfection in drill and discipline."

Mr. Gillette, a member of the New York 71st, who was taken prisoner at Bull Run, and who was among the company released by exchange a few days since, says:—

"The prisons and hospitals in Richmond are six in number, and are large tobacco warehouses, three of which are for the former purpose and three for the latter. One of these buildings is used for suspected Unionists, two others for hospitals, and the other three as general prisons. The prisoners are confined to the number of 100 on a floor, 60 by 40, and are allowed no exercise, not even in the yards. It

was not until late in the month of November that they received straw to lie upon. Their rations consisted of two meals a day. In the morning, half a loaf of bread, weighing 4 ounces, and a piece of beef weighing 3 to 4 ounces, and that not of the best quality. In the evening the same allowance of bread, and about a pint of soup, which was the broth in which the morning's rations were boiled, and a few vegetables. When they first arrived in Richmond, things were in such a confused state, that sometimes eighteen hours, and once twenty-four hours, elapsed before they had anything to eat.

"Subsequently a Prison Commissary's Department was established, and matters became more systematized. The prisons in Richmond are the most wretched of those through the South. A large one is now being built at Saulsbury, North Carolina, for the accommodation of all Federal prisoners on hand, or who may be taken. The space inclosed is fifteen acres, and when finished they will be better cared for. The Bull Run men are suffering greatly from the want of clothing. As the day was warm, they threw their coats and waistcoats away, and the remainder being much worn, it is not an uncommon sight to see them screening themselves from lookers-on from the lack of sufficient covering to insure decency. They have received no clothing, with exception of the few that are from Rhode Island, Massachusetts, and Indiana."

A letter from the 37th Indiana Regiment, of which Dr. William Anderson, of Ripley, is Surgeon, and Dr. J. R. Goodwin, from Franklin, is Assistant-Surgeon, says:—

"Since leaving our place of rendezvous, at Laurenceburg, on the eighteenth of October, the regiment has been severely afflicted with disease. First the measles visited us, of which we had 133 cases and one death. Others, however, died with the sequelæ of measles. The deaths in all have been about thirty."

NEWS AND MISCELLANY.

Wills' Hospital for the Indigent Blind and Lame.—The Twenty-seventh Annual Report of this Institution has just been submitted to the councils. The following is an abstract of it:—

"The expenses during the past year amounted to \$5537 04, expended as follows:—

Home expenses.....	\$2944 05
Salaries and wages.....	1273 01
Medical department.....	317 21
Real estate.....	902 77
Number of patients admitted during the year 1861.....	213
Number under treatment on first month first, 1861.....	19
Whole number in the hospital during the year.....	232
Number of discharges.....	209
Number remaining at present in the house.....	23

"Of those discharged there were—Cured, 136; improved, 52; incurable, 17; eloped, 4. Total, 209.

"Of those admitted, there were born in the United States, 90; Ireland, 90; England, 15; Germany, 12; Wales, 2; France, 2; Canada, 1; Scotland, 1. Total, 213.

"At the clinic, held semi-weekly, there have been treated by the surgeons on duty—New patients, 1681; whole number treated, 2532.

"From patients and other sources, during the year, \$558 89 was received, and the same was duly paid to the city treasurer by the steward of the hospital.

"There were 298 surgical operations performed by the surgeons of the hospital during the past year, of which 124 were upon house patients, and 174 upon out-door patients at the clinic. The principal operations were—For cataract, 38; strabismus, 32; foreign bodies, 36; entropion, 20; pterygium, 14; dilatation lachrymal duct, 47; artificial pupil, 10. Total, 217. The remaining operations were of minor importance."

Dr. Lewis Condict.—We are sorry to learn, from the newspapers, of the serious illness of this Nestor of the medical profession. Dr. Condict resides in Morristown, New Jersey, and his present illness is the result of a fall, fracturing the thigh-bone within the capsular ligament of the hip-joint, as we understand.

Dr. Condict graduated from the medical department of the University of Pennsylvania, in 1794, being, with Dr. John Redman Coxe, of this city, who graduated at the same time, the oldest graduates of that venerable school, and probably the oldest of any medical school in this country.

Dr. Gurdon Buck has resigned the post of Surgeon to the New York Eye Infirmary, and Dr. F. J. Bumstead, late Assistant-Surgeon, has been appointed to fill the vacancy.

Division Hospital.—Major Church, Division Surgeon of Gen. Burnside's Expedition, has established very excellent accommodations for the sick and wounded. The schooner *Recruit*, one of the best vessels in the fleet, is fitted up with 440 berths on two decks in her hold, and furnished with every appliance necessary to the care and comfort of the disabled. The division hospital ship is in charge of Dr. Samuel A. Green, assisted by Dr. Theron Temple and Dr. Dodge.

A Hint to the Pharmacopœia Committee.—A writer in the *Lancet* suggests that the old signs for the ounce, drachm, etc., should be abolished on account of their similarity and liability to produce mistakes.

The best suggestion that we have seen to prevent errors in quantities, is to write out the word, as ounce, grain, etc., in full.

The Massachusetts Medical College.—The *Boston Medical Journal* says "that the class of this institution this session numbers two hundred and four."

Manufactured Cream.—The *British Medical Journal* says "that cheap cream is sold in Liverpool which is made of arrow-root and milk."

